# SECRET REMEDIES

# AND THE RISE OF PHARMACEUTICAL MONOPOLIES IN FRANCE

# DURING THE FIRST GLOBAL AGE

by

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A dissertation submitted to Johns Hopkins University in conformity with the requirements for the degree of Doctor of Philosophy

Baltimore, Maryland

January 25, 2016

Abstract

This dissertation is a study of multi-generational pharmaceutical monopolies in early modern France. It explores the unexpected links between the rise of chymical medicine, the arrival of exotic plant substances in Europe, and the de-individualization of therapeutics that undergirded the production of pharmaceuticals sold for large-scale consumption in the years 1680-1740. Through a series of case-studies built around individual proprietary drugs, namely Robert Talbor's *remède anglois* for intermittent fevers; the Contugi family's poison antidote, *orviétan*; the Helvétius family's *poudre spécifique* against dysentery; and the Guiller-Lajutais *poudre febrifuge*, this dissertation demonstrates that a coterie of medical entrepreneurs sold proprietary drugs—often called secret remedies (*remèdes secrets*)—under the protection of royally-sponsored monopoly privileges. Some of these entrepreneurs became medical contractors for "corporate consumers," including the French fiscal-military state as well as the long-distance trading companies and missionary organizations of the first global age. These included the growing army and navy of France as well as the French East Indies Company and the Paris Foreign Missions Society.

At the heart of these developments was the concept of medicinal specifics: therapeutic substances which were believed to cure a given disease over large patient populations despite the peculiarities of individual constitutions. The rise of medicinal specifics was closely tied to the rise of chymical medicine as well as the arrival of new plant substances in Europe: theoretical innovations in Helmontian medicine and the so-called acid-alkali theory converged with the therapeutic effects of substances like cinchona bark and ipecacuanha root to problematize the categories of traditional Galenic pharmacology. In addition to exploring these transformations in pharmacological theory, the dissertation also emphasizes practical pharmacy, the concrete

processes of drying, grinding, distillation, and extraction that constituted the medical secrets which stood at the heart of pharmaceutical monopolies. By exploring medicinal specifics, state-sponsored monopolies, large-scale pharmaceutical production, and the "corporate consumption" of drugs in the decades around 1700, this dissertation contributes to our understanding of the question of de-individualization in therapeutics, the ongoing re-evaluation of the early modern medical marketplace, and to the place of European proprietary remedies in a global context.

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Acknowledgements

Over the past six years I have accumulated a number of debts both personal and professional which I may never be able to fully repay. First and foremost is my debt to my friend and mentor Gianna Pomata, who has given me not only her undivided attention and enthusiasm, which has helped fuel this project, but has also provided a personal and professional model to aspire to. I have spent more time in the seminar room with Lawrence M. Principe than any other professor at Hopkins, and more recently have had the opportunity to draw on his peculiar expertise in matters chymical as both our historical actors and research interests have converged.

At Johns Hopkins, thanks also go to Michael Kwass for helping me make this a work of French history as well as the history of medicine, and for nurturing my interest in the seventeenth and eighteenth centuries. In my own department thanks to Jeremy Greene for allowing me to sit in on field readings in pharmaceutical studies, and to Mary Fissell for co-supervising my field in the history of early modern medicine. I am also indebted to Coraleeze Thompson for keeping me on-track with the paperwork and for helping a wayward international student through the bureaucracy. Special thanks also go to Dan Todes, who taught me the history of modern medicine and much else besides.

I have also benefited from the kindness and interest of scholars further afield, most notably Elaine Leong, Matthew Neufeld, Sebastian Pranghofer, and Alisha Rankin. I am also grateful to Colin Jones and David W. Smith, who both freely and generously gave me the benefits of their expertise and accumulated knowledge without ever asking anything in return. Thanks also go to Didier and Pascale Kahn for their hospitality and friendship in Paris.

Thanks to my graduate student colleagues at Hopkins, especially Eli Anders, Julia Cummiskey, Seth Lejacq, and Marion Schmidt, who have provided moral support along the way and who have read portions of this dissertation or shared conversations with me at critical moments as my research unfolded. Thanks also go to my "fellow fellows" at the Chemical Heritage Foundation, Elena Conis, Roksana Filipowska, Lisa Haushofer, and Andreas Weber, and also to Carin Berkowitz for her kindness and accommodation in making mine and Kathryn's time in Philadelphia so pleasant.

At every stage of this process I have also benefited from the friendship of my countrymen and fellow early modernists Jean-Olivier Richard and Jonathan Greenwood. The two of you, as well as Margaret Greenwood and little Martha, have saved me from homesickness and given me the hospitality of both your couches and dining tables.

This project was supported by fellowships and travel grants from the Social Sciences and Humanities Research Council of Canada, the Charles Singleton Center for the Study of Pre-Modern Europe, and the Chemical Heritage Foundation.

My oldest debt is to my parents, Marcel and Melanie Rivest. I've ended up rather far from the farm, but I hope you know that I have carried parts of you with me every step of the way. Thanks also go to Dawn and Kelvin Desplanque, for welcoming me into their family. The greatest thanks of all go to Kathryn Desplanque, who has shared in this adventure with me and whose emotional and intellectual support has preserved me every step of the way.

Justin Rivest
Philadelphia
March 18, 2016

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# Introduction

This dissertation began as an inquiry into the history of medical regulation in seventeenth-century Paris, but over time it became a study of early pharmaceutical monopolists in the context of the "court capitalism" associated with the development of the French fiscal-military state. In pursuing the initial project, I cast a wide net through the judicial archives, looking for the stories of practitioners whom the university-educated physicians demeaned as "empirics." Although some learned physicians saw such practitioners as a possible wellspring of medical innovation, the medical establishment believed that they practiced dangerously by trial-and-error, without any appeal to the causal reasoning that was the hallmark of university medical learning. As my investigations moved into the final decades of the seventeenth century, I discovered to my surprise that a handful of these supposed "empirics" began to look far less like fringe practitioners of folk medicine, and far more like entrepreneurs and pharmaceutical monopolists.

These seventeenth-century "empirics" might more justly be called "privileged vendors" of so-called secret remedies (*remèdes secrets*), that is, proprietary pharmaceuticals. The terms "secret remedies" and "proprietary remedies" are not completely interchangeable: the early modern notion of *remèdes secrets* emphasized the medical secret of a drug, understood to include its recipe, preparation, and the identity of its main ingredients.[1] "Proprietary remedies" by contrast, as used by historians today, emphasizes the legal status of monopoly, which restricts its sale to a specific vendor. The

[1] These terminological distinctions build on Matthew Ramsey, "Traditional Medicine and Medical Enlightenment: The Regulation of Secret Remedies in the Ancien Régime," in *La médicalisation de la société française 1770-1830*, ed. Jean-Pierre Goubert (Waterloo, Ontario: Historical Reflections Press, 1982), 215–32.

remedies that form the subject of this dissertation were protected by monopoly privileges, and therefore "proprietary," and in most cases their preparations were also concealed, at least initially, by the shroud of trade secrecy. The two terms, however, converge insofar as both legal monopolies and medical secrets could be sold, inherited, and otherwise transmitted as property.

Because they were protected by legal monopolies and medical secrecy, these drugs stood apart from those normally compounded by apothecaries.[2] The drugs of the apothecaries came in two general types: they were either *officinal*, meaning they were prepared according to a standard, publically available formula from an established (usually printed) pharmacopoeia, and were often stocked ready-made in their boutiques; or they were *magistral*, tailored to fit an individual case from the personal prescription of a physician.[3] The lines between secret remedies and the drugs compounded by apothecaries could of course be blurred: as, for instance, when a secret recipe was made public and incorporated into the pharmacopoeia. But on the whole, secret remedies differed fundamentally from officinal compounds in that their recipes were carefully guarded rather than being published; indeed, the condition for granting a monopoly

[2] Long neglected in the historiography of medicine, apothecaries have recently seen a revival of interest: see notably Valentina Pugliano, "Botanical Artisans: Apothecaries and the Study of Nature in Venice and London, 1550-1610" (PhD dissertation, University of Oxford, 2013); James E. Shaw and Evelyn S. Welch, *Making and Marketing Medicine in Renaissance Florence*, *Clio Medica* 89 (Amsterdam: Rodopi, 2011); Leigh Chipman, *The World of Pharmacy and Pharmacists in Mamlūk Cairo* (Leiden: Brill, 2010); Stéphanie Tésio, *Histoire de la pharmacie en France et en Nouvelle-France au XVIIIe siècle* (Québec: Les Presses de l'Université Laval, 2009); Filippo De Vivo, "Pharmacies as Centres of Communication in Early Modern Venice," *Renaissance Studies* 21, no. 4 (2007): 505–21; Patrick Wallis, "Medicines for London: The Trade, Regulation and Lifecycle of London Apothecaries, c.1610-c.1670" (PhD dissertation, University of Oxford, 2002); Paula S. De Vos, "The Art of Pharmacy in Seventeenth- and Eighteenth-Century Mexico" (PhD dissertation, University of California, Berkeley, 2002); Christian Warolin, "Le cadre de vie professionnel et familial des apothicaires de Paris au XVIIe siècle" (Thèse de doctorat en Histoire, Université Paris IV-Sorbonne, 1994).

[3] Jean François Lavoisien, *Dictionnaire portatif de médecine, d'anatomie, de chirurgie, de pharmacie, de chymie, d'histoire naturelle, de botanique et de physique* (Paris: Pierre-François Didot le jeune, 1771), 15, 429.

privilege over a drug often rested on distinguishing it from those available in the "public domain" of the pharmacopoeias. Further, secret remedies differed from magistral prescriptions insofar as they were not tailored by a physician to fit the individual circumstance of a patient: every patient received the same drug. Somewhat more problematically, the term *remèdes secrets* is sometimes used synonymously with *remèdes spécifiques* or "medicinal specifics," drugs which targeted a defined disease or condition, for instance intermittent fevers, venereal disease, or dysentery.[4] The reason for conflating the two is that so many privileged secret remedies were also "specifics," pharmacologically speaking. Throughout this dissertation, I will treat "specific" primarily as a pharmacological category rather than a legal one.

The place of secrets in medicine, alchemy, and various craft traditions has gained a prominent place in the history of science, medicine, and technology in the past few decades. This literature has extended from a focus on technical and craft knowledge in printed "books of secrets" to include embodied artisanal knowledge as well as domestic medicine and recipe books.[5] This literature has most recently been extended to consider materials and practices as well as the utility of re-enactment as a tool for accessing

[4] The category of medicinal specifics is explored in detail in ch. 2.

[5] See most notably William Eamon, *Science and the Secrets of Nature: Books of Secrets in Medieval and Early Modern Culture* (Princeton, N.J.: Princeton University Press, 1994); Pamela O. Long, "Power, Patronage, and the Authorship of Ars: From Mechanical Know-How to Mechanical Knowledge in the Last Scribal Age," *Isis* 88, no. 1 (1997): 1–41; Pamela O. Long, *Openness, Secrecy, Authorship: Technical Arts and the Culture of Knowledge from Antiquity to the Renaissance* (Baltimore: Johns Hopkins University Press, 2001); Pamela H. Smith, *The Body of the Artisan: Art and Experience in the Scientific Revolution* (Chicago: University of Chicago Press, 2004); Allison Kavey, *Books of Secrets: Natural Philosophy in England, 1550-1600* (Urbana, IL.: University of Illinois Press, 2007); Jo Wheeler, *Renaissance Secrets, Recipes and Formulas* (London: Victoria and Albert Museum, 2009); Elaine Leong and Alisha Rankin, *Secrets and Knowledge in Medicine and Science, 1500-1800* (Farnham: Ashgate, 2011); Michelle DiMeo and Sara Pennell, *Reading and Writing Recipe Books, 1550-1800* (Manchester: Manchester University Press, 2013).

artisanal knowledge.[6] In this dissertation, I bring attention to a hitherto neglected and yet fundamental issue—namely, the way in which medical secrets became entwined with the interests of the French fiscal-military state.[7] I show that many vendors of secret remedies held monopoly privileges over their pharmaceutical inventions, granted by the highest possible authority, the crown itself. Far from being marginalized, they were closely tied to the world of the royal court at Versailles, held prominent positions in the Parisian medical marketplace, and supplied their drugs in bulk to the French state for use by its ever-growing army and navy.

This direction of research emerged from the archival constraints to my initial project on urban medical regulation. Unlike other European jurisdictions, Paris lacks a concentrated archival fonds focused on medical licensing and lawsuits. Consequently, I had to find my way through the archives in a different way, by following the trail of individuals through multiple fonds and archives, rather than systematically examining a single fonds. This has led me to tell a different kind of story than that found in much of the historiography on early modern medical regulation. That historiography drew primarily on archives that were generated by physician-dominated medical tribunals and licensing authorities. Such archives form the basis for much of the existing scholarship on

[6] See for example Lawrence M. Principe, "'Chemical Translation' and the Role of Impurities in Alchemy: Examples from Basil Valentine's Triumph-Wagen," *Ambix* 34, no. 1 (1987): 21–30; Pamela H. Smith, "In the Workshop of History: Making, Writing, and Meaning," *West 86th: A Journal of Decorative Arts, Design History, and Material Culture* 19 (2012): 4–31; Pamela H. Smith, Amy R. W. Meyers, and Harold J. Cook, *Ways of Making and Knowing: The Material Culture of Empirical Knowledge* (Ann Arbor: University of Michigan Press, 2014). See also the pioneering work of Lawrence M. Principe, "'Chemical Translation' and the Role of Impurities in Alchemy: Examples from Basil Valentine's Triumph-Wagen," *Ambix* 34, no. 1 (1987): 21–30

[7] Broadly speaking, a "fiscal-military state" is a state that develops systems of taxation and other fiscal mechanisms in order to support its military in periods of protracted warfare. For the classic statement, see John Brewer, *The Sinews of Power: War, Money, and the English State, 1688-1783* (New York: Knopf, 1989); for a review of the development of the French fiscal-military state, see Joël Félix and Frank Talett, "The French Experience, 1661-1815," in *The Fiscal-Military State in Eighteenth-Century Europe Essays in Honour of P.G.M. Dickson*, ed. P. G. M Dickson and Christopher Storrs (Farnham: Ashgate, 2009), 147–66.

medical regulation in Spain, Italy, and England.[8] The institutions that generated these records were called *protomedicati* in Spain and Italy, and find structural analogues in other jurisdictions, most notably the London College of Physicians. Their records have allowed historians to closely follow the efforts of university-trained physicians to repress illicit practice (understood both in the sense of unlicensed practitioners as well as transgression of the medical division of labor), adjudicate patient complaints, and uphold their supervisory powers over the guilds of surgeons and apothecaries. The *Protomedicati* records also offer insight into how physicians licensed and policed those practitioners who worked outside the formal communities of the medical guilds and colleges, notably midwives, specialist operators, and charlatans. Between the sixteenth and seventeenth centuries, these regulatory bodies had come into being in several different ways: some emerged out of local medical colleges, while others were initiatives of municipal governments or, in the Spanish cases, of the royal physicians associated with the central monarchy and its viceroys.[9]

Why was there no equivalent to these institutions in the kingdom of France or in the city of Paris? The answer strikes at the heart of how my project transformed. As late

[8] On Spain, see John Tate Lanning and John J TePaske, *The Royal Protomedicato: The Regulation of the Medical Professions in the Spanish Empire* (Durham: Duke University Press, 1985); María Luz López Terrada and Àlvar Martínez Vidal, eds., *Dynamis*, El Tribunal del Real Protomedicato en la Monarquía hispànica, 1593-1808, no. 16 (1996); Michele L. Clouse, *Medicine, Government and Public Health in Philip II's Spain: Shared Interests, Competing Authorities* (Farnham: Ashgate, 2011). On Italy, see David Gentilcore, "All That Pertains to Medicine: Protomedici and Protomedicati in Early Modern Italy," *Medical History* 38 (1994): 121–42; Gianna Pomata, *Contracting a Cure: Patients, Healers, and the Law in Early Modern Bologna* (Baltimore: Johns Hopkins University Press, 1998, ch. 1, 1-24; David Gentilcore, *Healers and Healing in Early Modern Italy* (Manchester: Manchester University Press, 1998); Elisa Andretta, *Roma medica: anatomie d'un système médical au XVIe siècle* (Rome: École française de Rome, 2011). On England, see Margaret Pelling and Webster, Charles, "Medical Practitioners," in *Health, Medicine and Mortality in the Sixteenth Century* (Cambridge: Cambridge University Press, 1979), 165–235; Harold J. Cook, *The Decline of the Old Medical Regime in Stuart London* (Ithaca: Cornell University Press, 1986); Margaret Pelling, *Medical Conflicts in Early Modern London: Patronage, Physicians, and Irregular Practitioners, 1550-1640* (Oxford: Clarendon Press, 2003).

[9] Gentilcore, *Healers and Healing*, chap. 2; Gentilcore, "All That Pertains to Medicine."

as the 1760s, the physician and jurist Jean Verdier, author of the main legal treatise dealing with medicine in Ancien Régime France, began his work by lamenting the kingdom's lack of a separate tribunal and regulatory body.[10] In fact, the first efforts to create such a body would not come until the very end of the Ancien Régime, with the establishment of the *Société royale de médecine* in 1776.[11] This organization aimed at coordinating the pharmaceutical licensing and public response to epidemics, but never approached the scope of the *protomedicati* as a licensing bureau and medical tribunal. Likewise, within the capital, the Paris Medical Faculty never held jurisdiction like an urban *protomedicato*. Instead of enjoying a separate judicial authority, the physicians of the Paris Faculty—as well as the apothecaries' and surgeons' guilds—were obliged to assert their corporate privileges and bring lawsuits against interlopers in the civil courts of the Châtelet and the Parlement.[12]

This French deviation from European trends was rooted in the tension between the Paris Faculty and the royal physicians, who represented the two most likely sources of such a regulatory initiative. The powers of the Paris Faculty were constantly checked by practitioners tied to the French court, who held a traditional privilege to practice not

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[10] Jean Verdier, *La jurisprudence de la medicine en France* (Alençon: Malassis le jeune, 1762), 1–2, 722.

[11] Caroline Hannaway, "Medicine, Public Welfare and the State in Eighteenth Century France: The Société Royale de Médecine of Paris (1776-1793)" (Dissertation, Johns Hopkins University, 1977); Charles Coulston Gillispie, *Science and Polity in France at the End of the Old Regime* (Princeton: Princeton University Press, 1980), 118–226; Matthew Ramsey, *Professional and Popular Medicine in France, 1770-1830: The Social World of Medical Practice* (Cambridge: Cambridge University Press, 1988); Colin Jones, "The Médecins Du Roi at the End of the Ancien Régime and in the French Revolution," in *Medicine at the Courts of Europe, 1500-1837*, ed. Vivian Nutton (London: Routledge, 1990), 209–63; Laurence Brockliss and Colin Jones, *The Medical World of Early Modern France* (Oxford: Clarendon Press, 1997), 760–782.

[12] For all practical purposes, the best guide on the jurisdictions of Paris and the royal house remains Michel Antoine et al., *Guide des recherches dans les fonds judiciaires de l'Ancien Régime* (Paris: Imprimerie nationale, 1958); see also J. H. Shennan, *The Parlement of Paris* (Thrupp, Stroud, Gloucestershire: Sutton, 1998); Richard Mowery Andrews, *Law, Magistracy and Crime in Old Regime Paris: 1735-1789* (Cambridge: Cambridge University Press, 1994).

only at Versailles, Fontainebleau, or wherever else the court might be, but also in the capital.[13] Many of these court physicians hailed from provincial or even foreign medical schools, and the vaunted position of royal first physician typically alternated between graduates of the Paris Faculty and its southern rival, the University of Montpellier. The centralizing efforts of the Paris Faculty were also resisted by the local surgeons and apothecaries. The tension between these various interests had the effect of producing a stalemate, which slowed the process of regulatory centralization.

If comprehensive regulation was never imposed by the Paris Faculty, why did it not emerge from above, from the central monarchy, as it did with the *Tribunal del protomedicato* of the continent's other great absolutist state, Spain? The *Tribunal*, overseen by the Spanish king's first physician (*protomédico*), was established quite early in 1477 and quickly became a model for other medical regulatory bodies. In the sixteenth century, its authority was extended beyond Castile to include the whole Iberian Peninsula and Spain's Italian territories, and eventually the Spanish Americas.[14] The jurisdictional authority of the Spanish *Tribunal* was sometimes contested and negotiated with local authorities, but it succeeded even in dictating medical curricula and examination procedures to the kingdom's universities—a regulatory feat unparalleled in Europe at this time—and survived until the Bourbon reforms of the late eighteenth century.[15]

The royal first physicians of France focused primarily on their role as health care providers to the king and royal family and oversaw the other practitioners of the royal

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[13] Alexandre Lunel, *La maison médicale du roi, XVIe-XVIIIe siècles. Le pouvoir royal et les professions de santé* (Seyssel: Champ Vallon, 2008), 87–92.

[14] See Clouse, *Medicine, Government and Public Health in Philip II's Spain*. On Naples, see Gentilcore, *Healers and Healing*; on New Spain, see Lanning and TePaske, *The Royal Protomedicato*.

[15] On the *Tribunal del protomedicato* in Iberia, see Clouse, *Medicine, Government and Public Health in Philip II's Spain* and López Terrada and Martínez Vidal, eds. *Dynamis* 16 (1996); for the kingdom of Naples, see Gentilcore, *Healers and Healing*; and for the Spanish Americas, see Lanning and TePaske, *The Royal Protomedicato*.

medical household. Alexandre Lunel has demonstrated that the first physicians also offered counsel to the state on medical reforms, particularly in the eighteenth century, but these projects never led to the creation of a central regulatory bureaucracy with the same scope of action as a *protomedicato*. By the reign of Louis XIV (1643–1715), the first physicians had nonetheless accumulated a collection of other important rights, which retained a more personal character. These included the regulation of apothecaries in those parts of the kingdom where there were no guilds; the supervision of the kingdom's spas and mineral waters; and, for a few decades, the superintendency of the *Jardin du Roi*.[16] Last but not least, the first physician also recommended the granting of royal monopoly privileges for proprietary drugs.[17] The growing significance of these drugs, typically called "secret remedies," and the legal privileges surrounding them form the subject of this dissertation.

These pharmaceutical privileges were granted by the crown with the stated interest of rewarding medical innovation, ensuring the good quality of medical care, and benefitting the people of France, but as we shall see, many were tied to the patronage of prominent figures at court, the venality of the royal first physicians who issued the medical recommendations, and the expediencies of state interests in supplying effective drugs to the army. These privileges allowed pharmaceutical vendors to assert their monopolies by legally pursuing counterfeiters, and allowed them to circumvent urban trade regulations throughout the kingdom, most notably the corporate privileges of apothecaries.

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[16] Lunel, *La maison médicale du roi*, 204–5. Lunel's book was fundamental in re-orienting the direction of my research.

[17] Ibid., 277–281; Brockliss and Jones, *The Medical World of Early Modern France*, 627–630; Ramsey, "Traditional Medicine and Medical Enlightenment," 217–218.

These privileges guaranteed monopolies over therapeutic substances, rather than attesting to the knowledge and skills of practitioners. As such, privilege holders could run the full gamut of the medical world and beyond, from learned physicians to street charlatans, and from retired soldiers to tobacco controllers. In contrast with the predominantly patrilineal transmission of family property and office in early modern France, both the privileges and the medical secrets were passed down bilaterally and through ties of affinity: the widows, sisters, and daughters of male privilege-holders play recurring roles in these familial monopolies, a fact we will encounter repeatedly in this dissertation. Far from being marginalized, a handful of these vendors were able to use their courtly connections to secure medical monopolies. The most successful even served as military-medical contractors, selling their drugs in bulk to the army and navy. They became wealthy, were able to secure places for their children within the corporate medical community, and most importantly, they established the basis for multi-generational family medical businesses. Interestingly, they seem at once to be linked with the past—the traditional world of medical empiricism and popular medicine—but also to look ahead to the future, anticipating a world of government contracting and proto-industrial pharmaceutical production.

I was first alerted to the emergence of an "entrepreneurial" culture in eighteenth-century French medicine by Laurence Brockliss and Colin Jones, who dedicate a chapter to the subject in their foundational survey of the French medical world.[18] Although they

[18] See Brockliss and Jones, *The Medical World of Early Modern France*, esp. Ch. 10, "Medical Entrepreneurialism in the Enlightenment," 622–670. In their description of a rise of medical entrepreneurialism in the eighteenth century Brockliss and Jones are obviously influenced by Roy Porter, particularly *Health for Sale: Quackery in England, 1660-1850* (Manchester: Manchester University Press, 1989), Ch. 4, entitled "Medical entrepreneurship in the consumer society," 21–59. Although Porter stresses the peculiarity of the English experience against that of the Continent, his account of "quack medicine" as inherently modern and attuned to "the specific orientation of a commercial capitalist, spectacle-loving,

nod to seventeenth-century "precursors" like Adrien Helvétius and Robert Talbor and to the "privileged state markets like the court and the army," Brockliss and Jones follow Roy Porter in situating the phenomenon of "entrepreneurialism" primarily within the later eighteenth century and link it to the marketplace of individual consumers.[19] My dissertation examines this phenomenon in much greater detail and also from a new perspective: first, it assembles a fine-grained archival picture of some of the most famous medical monopolists in order to better understand their emergence and links with state power; second, it explores how developments in "secret" and "specific" remedies emerged from contemporary intellectual debates related to the rise of chymical medicine and the decline of Galenism; and third, it extends the range of the discussion chronologically further back into the seventeenth century to show that in the 1680s medical entrepreneurialism was already firmly linked to what some historians have called "court capitalism."

By "court capitalism" I mean the peculiar ways in which the capitalist market was shaped within the framework of an Ancien Régime state whose power was concentrated at a royal court, which served as the prime locus of negotiation. This framework included the venality of governmental offices, the farming out of important state functions to private contractors, and the creation of powerful state-sponsored monopolies.[20] Like so

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consumer-oriented society," has been enormously influential in the history of early modern medicine on both sides of the Channel.

[19] Brockliss and Jones, *The Medical World of Early Modern France*, 622–627; Porter, *Health for Sale*, Ch. 4, entitled "Medical entrepreneurship in the consumer society," 21–59.

[20] Gail Bossenga, "Markets, the Patrimonial State, and the Origins of the French Revolution," *1650-1850: Ideas, Aesthetics, and Inquiries in the Early Modern Era* 11 (2005): 443-510, esp. 460–464 and 480–485. Bossenga draws on and expands the category from George V. Taylor, "Types of Capitalism in Eighteenth-Century France," *The English Historical Review* 79, no. 312 (July 1, 1964): 478–97. "Court capitalism" has also been employed recently by Michael Kwass to explain the Farmers General and the tobacco and salt monopolies. See Michael Kwass, "Court Capitalism, Illicit Markets, and Political Legitimacy in Eighteenth-Century France: The Salt and Tobacco Monopolies," in *Questioning Credible*

many other players, pharmaceutical monopolists looked for opportunities in this context, and in the years around 1700 several had found in the state not only a powerful legitimator of monopoly but also a potentially lucrative consumer of its products, the drugs themselves.

My dissertation is based on a corpus of sources which included pharmaceutical privileges, royal edicts, published pharmacological texts, as well as a host of other types of documents assembled around a sequence of case-studies, stretching from the late 1670s all the way into the first years of the nineteenth century. Besides the cases of the so-called Louvre Capuchins and the celebrated medical adventurer Robert Talbor, I look particularly closely at three multi-generational familial pharmaceutical monopolies: those of the Contugi family, active 1647-1741; the Helvétius family, active 1688-1755; and the Guiller-Lajutais family, active 1713-1808. The Contugi family patented an immensely popular poison antidote, called the *orviétan*, and succeeded in defending their privileges from rival charlatans and apothecaries for four generations. The Helvétius family for its part patented an anti-dysentery medication, called the *remède spécifique*, based on the ground root of ipecacuanha, a plant native to South America, which they later supplemented with a whole series of drugs for other ailments. The Helvétius drugs were supplied in bulk to the French state for the use of soldiers and peasants. Finally, the Guiller-Lajutais family patented an inexpensive *poudre fébrifuge*, a drug against intermittent fevers based on a common European wood spurge, which they touted as an equally effective but more economical alternative to importing cinchona from the Spanish New World.

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*Commitment: Perspectives on the Rise of Financial Capitalism*, ed. D'Maris Coffman, Adrian Leonard, and Larry Neal (Cambridge: Cambridge University Press, 2013), 228–50.

Tracing the outlines of these monopolies through privileges, lawsuits, sales records, and notarial acts has necessitated ventures into a variety of different archives. These included the surviving fonds of the Paris Faculty and the apothecaries' guild, held at the Bibliothèque interuniversitaire de santé, as well as a variety of judicial fonds at the Archives nationales, ranging from the Châtelet up to the extraordinary commissions of the Conseil privé; the notarial archives of the Minutier central; and the fonds of the central state, most notably the dispatch registers of the Secretary of State for the Royal Household, the principal source from which pharmaceutical privileges emanated. Parts of this documentation had already treated anecdotally, but this dissertation represents the first attempt to investigate it systematically.[21] Tracing the sales of these drugs eventually led me into the archives of the French army and navy as well as those of the Paris Foreign Missions Society and the French East Indies Company, all of which purchased the drugs of the Helvétius and Guiller-Lajutais families in bulk quantities. As far as I know, these archives are hitherto untapped for material on pharmaceutical monopolies. The research I present here is the first exploration in this respect.

In addition to tracing the social and economic history of pharmaceutical monopolies, this dissertation also shows that their history had important intellectual implications. Traditional Galenic medicine targeted humoral imbalances and had to be carefully tailored to a patient's unique individual constitution: the reasoned deliberation

[21] See Pierre Julien, "Bibliographie des publications de Maurice Bouvet," *Revue d'histoire de la pharmacie* 73 (1985): 325–61; Claude-Stéphen Le Paulmier, *L'Orviétan. Histoire d'une famille de charlatans du Pont-Neuf aux XVIIe et XVIIIe siècles* (Paris: Librairie illustrée, 1893); Louis Lafond, *La dynastie des Helvétius. Les remèdes du Roi.* (Paris: Occitania, 1926). In tracing these monopolies from archive to archive, I have benefited immensely from a rich body of nineteenth- and early twentieth-century secondary literature, produced primarily by pharmacists and physicians who cultivated an avid interest in the histories of their professions. Although their work is in some cases over a century old, the collections of sources which figures such as Maurice Bouvet, Claude-Stéphen La Paulmier, and Louis Lafond assembled furnished me with my earliest leads in extending my own investigations into the archives. They stand as a reminder of the invaluable resources which earlier scholarship can offer to present-day historians.

that calibrated therapy and regimen for each specific patient was seen as the hallmark of learned medicine. The drugs described in this dissertation, by contrast, were often categorized pharmacologically as medicinal specifics (*spécifiques* or *specifica*): they were supposed to respond to a given disease regardless of the peculiarities of an individual's temperament, and could thus be used to the same effect by entire populations. This "one-size-fits-all" approach to medicine smacked of medical empiricism to Galenic physicians, but found assertive proponents among the newer school of chymical medicine or iatrochemistry.[22] On an intellectual level, the rise of pharmaceutical monopolies is closely tied to the emergence of new spheres of medical activity on a mass scale, the arrival of new therapeutic substances in Europe, which challenged conventional Galenic pharmacological theories, and the chymical debate about the ontological status of disease.

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This dissertation is divided into six chapters. Chapter 1 explores the social and legal basis of the pharmaceutical privilege regime in France.[23] The chapter draws on royal legislation and a corpus of fifty-six pharmaceutical privileges from 1670 (the date of the earliest registers) to 1728, which marks the first attempt to reform the privilege

[22] I follow William R. Newman and Lawrence M. Principe in using the archaic "chymistry" and the adjective "chymical" to refer to the premodern discipline prior to the exclusion of transmutational alchemy. To refer to the medical branch of chymistry, I use "chymical medicine" or "iatrochemistry" interchangeably throughout. On this usage see William R. Newman and Lawrence M. Principe, "Alchemy vs. Chemistry: The Etymological Origins of a Historiographic Mistake," *Early Science and Medicine* 3, no. 1 (1998): 32–65.

[23] The initial goal of this chapter was to provide for Ancien Régime France what Joseph Gabriel has recently provided for the pharmaceutical industry of the nineteenth-century United States: a synthetic account of "secret remedies" looking at the interrelations between law, the market, ethical values. See Joseph M. Gabriel, *Medical Monopoly: Intellectual Property Rights and the Origins of the Modern Pharmaceutical Industry* (Chicago: University of Chicago Press, 2014). It is also to be hoped that Gabriel's work will elicit further work on the pre-modern antecedents to the modern pharmaceutical industry.

system and re-examine existing privileges.[24] After 1731, the process of reviewing applications was theoretically delegated to a standing commission, but remained a de facto right of the royal first physician, subject to his personal recommendation and the patronage of prominent figures at court. This chapter also contextualizes pharmaceutical privileges as a peculiarly medical form of "court capitalism," placing it alongside other varieties of industrial privilege, which were used as economic tools by the state and often served to undercut older urban corporate privileges.

Chapter 2 moves to consider the concept of the "medicinal specific" that was invoked to explain the action of several of the most prominent proprietary drugs in this period and came to form a therapeutic criterion for their evaluation. The chapter demonstrates that although the notion of medicinal specifics drew on an older medieval tradition, this notion was revived in the seventeenth century by chymical views of pathology. The vendors of proprietary remedies often invoked a concept of the therapeutic action of specifics to explain the unique effects of the substances they sold—effects which often defied the categories of Galenic pharmacology. I argue that the production of chymical medicines was patronized by Louis XIV by sponsoring the pharmaceutical laboratory of the Louvre Capuchins and purchasing the secret to Robert Talbor's cinchona-based *Remède Anglois*. I also show that chymical ideas of pathology and pharmacology had a substantial influence on the royal first physicians Antoine Daquin (1629–1696) and Guy-Crescent Fagon (1638–1718), the principal arbitrators of medical privileges.

[24] Ramsey, "Traditional Medicine and Medical Enlightenment"; Maurice Bouvet, "Histoire sommaire du remède secret," *Revue d'histoire de la pharmacie* 45, no. 153 (1957): 57–63; Maurice Bouvet, "Les commissions de contrôle des spécialités pharmaceutiques au XVIIIe siècle : suite et fin," *Bulletin de la Société d'histoire de la pharmacie* 10, no. 36 (1922): 119–24.

By looking closely at Talbor's cinchona preparation I also show that colonial botanical substances were transformed once they arrived in Europe in two ways: conceptually, as they were assimilated into existing European understandings of pharmacology, and materially, as they were processed through the long and careful works of drying, grinding, infusion, and distillation. Like the identities of the ingredients themselves, these concrete processes constituted the medical secrets which formed the backbone of familial medical monopolies, and are treated in detail in each of the following three chapters.

Whereas Chapters 1 and 2 provide a general look at the overall legal and intellectual framework in which proprietary drugs functioned under the Ancien Régime, Chapters 3-5 offer specific case-studies of actual drug monopolies in action over multiple generations. Chapter 3 deals with the Contugi family and their poison antidote, *orviétan*. The family patriarch, Christophe Contugi, was a "charlatan" in the classic sense of the word (that is, a vendor who peddled his drug through a stage-show in the market square) but he and his successors also had surprisingly close relations with the Paris Faculty of Medicine, a fact which problematizes the tendency to relegate charlatans to the "penumbra" of the medical world.[25] Indeed, after passing through three generations of the Contugi family, the privilege for *orviétan* was eventually purchased by the regent doctor Charles Dionis, who expanded its sale through a network of sub-vendors who sold it on his behalf. On a thematic level, this chapter focuses on the relationship between branding

[25] On the core-penumbra model see Brockliss and Jones, *The Medical World of Early Modern France*, chap. 4, esp. 237; for alternatives, see Gentilcore, *Healers and Healing*, 1–5. See also the recent reassessments of David Gentilcore, "Medical Pluralism and the Medical Marketplace in Early Modern Italy," in *Medical Pluralism: Past - Present - Future*, ed. Robert Jütte (Stuttgart: Franz Steiner Verlag, 2013), 45–56; and Matthew Ramsey, "Medical Pluralism in Early Modern France," in *Medical Pluralism: Past - Present - Future*, ed. Robert Jütte (Stuttgart: Franz Steiner Verlag, 2013), 57–80.

and secrecy, particularly the reconfiguration of the royal privilege into a trademark, which occurred whenever a medical secret was disclosed in published pharmacopoeia, and competing versions of the drug came to be produced by rival charlatans and local apothecaries—an early modern parallel to the modern concept of "genericide."[26]

Chapter 4 follows the story of the Dutch-born physician Adrien Helvétius and his son Jean-Claude Adrien, whose fortunes rested on the *poudre spécifique*, a remedy against dysentery based on the Brazilian ipecacuanha root. The chapter explores the ways in which Adrien was able to leverage his success in private practice among Parisian elites and forge close ties with France's central fiscal and military administration. These ties granted him access to hospital patients for clinical trials of his drug, and to military populations as the drug's consumers. He became a bulk supplier of his drugs to the French army and to royally-funded poor relief projects in the French countryside. He expanded beyond his dysentery remedy to produce a lineup of other pre-packaged drugs, distributed in standardized physic chests with printed instructions sheets, which travelled out to the provinces through the fiscal infrastructure of the absolutist state and the local charitable infrastructure. The main thematic argument of the chapter is that Helvétius' patronage connections made him eminently well-situated to tap into the new possibilities of harnessing state networks for the large-scale testing and distribution of proprietary drugs in the decades around 1700.

Chapter 5 follows the *poudre fébrifuge*, first patented by Ferdinand de Guiller in 1713 as a more affordable "indigenous" European alternative to exotic cinchona-based

[26] "Genericide" describes the passage of a trademarked name into the vernacular as a common term of reference for a whole class of competing products: modern examples include jell-o, xerox, and kleenex, and in the pharmaceutical industry, adrenaline and aspirin. For a succinct description and additional references see Jeremy Greene, *Generic: The Unbranding of Modern Medicine* (Baltimore: Johns Hopkins University Press, 2014), esp. 22, 283n4.

drugs. The chapter describes how the remedy came to be widely distributed to the military and the French East Indies Company by Guiller's putative successor, Pierre Brodin de Lajutais. The chapter also examines the persistent ambiguities in testing standards and the varying opinions on the efficacy of the drug between the 1710s and the 1770s, as the drug passed through several reforms of the privilege regime. It provides, moreover, a case study of the inherent risk of breakdown in the chain of inter-generational transmission of medical secrets and privileges. Consequently, the thematic focus of the chapter is on the challenges a proprietary drug faced as it travelled through time—challenges posed by changing regulatory procedures as well as by gaps in the transmission of the medicinal knowledge on which it was based.

Chapter 6 follows these three drugs—*orviétan*, the *remède spécifique*, and the *poudre febrifuge*—as they travelled outside of metropolitan France, to consider the role that they played in French colonial, missionary, and mercantile endeavors. While most studies of medical regulation and pharmaceutical monopolies have a metropolitan and urban focus, I have endeavored to demonstrate how far from Paris these French proprietary pharmaceuticals could reach in this period. In so doing I have treated the city of Paris as a "ville-monde," whose archives preserve the traces of important political, intellectual, and economic connections to the wider world.[27] In addition to selling their drugs to the state, secret remedies vendors also found other "corporate consumers," notably overseas trading companies and missionary orders, which were likewise interested in purchasing bulk quantities of proprietary drugs. In the 1680s, *orviétan* was used by French agents in the wilds of North America from Hudson Bay to the Mississippi

[27] Antonella Romano and Stéphane Van Damme, "Penser les savoirs au large (XVIe-XVIIIe siècles)," *Revue d'histoire moderne et contemporaine* 55, no. 2 (2008): 7–18.

valley. By 1693, Helvétius' drugs could be found in the hands of missionaries in Southeast Asia. In the 1730s, the French East Indies Company was shipping Lajutais' *poudre fébrifuge* to its far-flung posts in the Indian Ocean. In this final chapter, I also aim to complement the historiography on colonial bioprospecting, by showing that the in-flow of raw plant substances into Europe was accompanied by an out-flow of compounded proprietary drugs to the territories of European expansion in the first global age.[28]

[28] On colonial bioprospecting and the importation of medicinal substances in Europe, see for example from a growing literature: Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge, Mass.: Harvard University Press, 2004); Londa Schiebinger and Claudia Swan, *Colonial Botany: Science, Commerce, and Politics in the Early Modern World* (Philadelphia: University of Pennsylvania Press, 2005); Harold J. Cook, *Matters of Exchange Commerce, Medicine, and Science in the Dutch Golden Age* (New Haven: Yale University Press, 2007); Patrick Wallis, "Exotic Drugs and English Medicine: England's Drug Trade, c. 1550–c. 1800," *Social History of Medicine* 25, no. 1 (2012): 20–46; Stefanie Gänger, "World Trade in Medicinal Plants from Spanish America, 1717-1815," *Medical History* 59, no. 1 (2015): 44–62.

# Chapter 1

## "The means by which empiricism has been tolerated in recent centuries": Royal privileges for secret remedies in early modern France

On July 3, 1728, the State Council of Louis XV promulgated an *arrêt* to bring order to the medical anarchy then reigning in the capital. Unqualified individuals were haphazardly distributing so-called "specific" remedies (*remèdes prétendus spécifiques*) to the sick without regard for differences in their age or sex and without consulting physicians.[1] At first glance the text of this *arrêt* reads much like any other early modern denunciation of illicit medical practice. But the producers and vendors of these pernicious "remèdes prétendus spécifiques" were no ordinary empirics, as the operative portion of the edict demonstrates. The State Council and the king's first physician, Claude Jean Baptiste Dodart (1650-1730), had much bigger fish to fry:

> His Majesty wishes that all persons without exception who have heretofore obtained brevets, permissions and privileges for the distribution of specific and other remedies, whoever they may be, shall be required to bring them back or send them to the Lieutenant General of Police of Paris within two months, counting from the day the present *arrêt* is published; so that, following the examination of said brevets and the remedies they authorize, a verdict maybe be given by His Majesty, be it for the confirmation or revocation of said brevets, permissions, and privileges, as the case may be.[2]

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[1] "Sa Majesté etant informé que plusieurs particuliers sans qualité, distribuent dans la ville et fauxbourgs de Paris, des remedes pretendus specifiques, dont il peut resulter des inconvenients d'autant plus dangereux, que ces particuliers, sans consulter les medecins ny aucunes personnes de l'art, dispensent ces remedes au hasard et a des malades de tous ages et de tout sexe," *Arrêt du conseil d'Etat du Roy, qui défend à toutes personnes de distribuer des remèdes spécifiques et autres sans en avoir obtenu de nouvelles permissions. Du 3 Juillet 1728.* (Paris: P. J. Mariette, Imprimeur de la Police, 1728), 1–2. My working copy is BnF F- 21107 (117). Cf. AN E 2088, Minutes d'arrêts, Secrétaire d'État de la Maison du Roi, fol. 167r–168r (3 juillet 1728). For royal edicts and *arrêts* I will cite printed versions where available, marking the ms. copies in the AN Minutes d'arrêts registers only in the first citation.

[2] "Veut Sa Majesté que toutes personnes sans exception qui ont cy-devant obtenu des Brevets, permissions, et privileges, pour la distribution de remedes specifiques et autres, quel qu'ils puissent etre, soient tenuës de les raporter ou envoyer dans deux mois à compter du jour de la publication du presente Arrest, au Sieur Lieutenant General de Police de Paris, pour après l'examen fait desdits Brevets, permissions et privileges, ensemble des remedes dont ils autorisent la distribution, estre par Sa Majesté

The attempt on the part of the first physician Dodart to re-examine and, if necessary, revoke existing privileges was a response to the fact that a veritable industry of privileged vendors had emerged by the early eighteenth century. This *arrêt* was the first of a series which would, between 1728 and 1731, provide increasingly articulate legislation regulating the trade in proprietary remedies in France. But the very need for all hitherto granted privileges to be re-examined and for the medications they licensed to be tested suggests that the practice of granting particularistic privileges for proprietary remedies had somehow run off the rails in the first decades of the eighteenth century.

What had been the norm before the 1728 legislation? In his 1762 *Jurisprudence de la médecine*, the most extensive treatise on medical regulation in France, the physician and lawyer Jean Verdier provides some notion of how the 1728 *arrêt* came into being, and what abuses it was intended to rectify. Verdier observed that the most famous empirics had long known that the best way of evading challenges from the faculties and other medical corporations in France was to secure a royal privilege. They might petition local medical faculties and Parlements for various permissions and certifications, but only a royal privilege encompassing the whole kingdom could override the problems they would otherwise face when crossing into differing legal jurisdictions. And since kings would never grant such privileges without the medical counsel of their first physicians, the approbation of specific remedies came, through custom (*usage*) to constitute an

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statué ce qu'il appartiendra, tant pour la confirmation que pour la revocation desdits Brevets, permission et privileges, s'il y échoit," Ibid., 2.

established right (*droit établi*).[3] As Verdier puts it, "Such was the order followed in recent centuries, by which means empiricism has been tolerated."[4]

Like other contemporaries, Verdier admits that the licensing of proprietary remedies was in some cases desirable. Pure chance and even charlatanism had enriched medicine with new remedies, in his view, and so empiricism could not be rejected wholesale.[5] This was particularly important in the case of medicinal specifics, whose occult virtues could only be identified through the trial-and-error associated with the practice of empirics. Writing at the height of the Enlightenment, Verdier saw in empirics a potential wellspring for medical innovations, and believed that a careful regime of privilege-granting, kept in narrow bounds, could ensure that the true fruits of empiricism would be safely reaped while carefully avoiding the abuses that might come with it.

In France, Verdier tells us, important steps toward producing such a balanced situation came in 1728 following the remonstrances of the royal first physician Dodart:

> M. Dodart, concerned by the abuses that were being committed in the distribution of these remedies, even more concerned to find himself forced by human respect to encourage these abuses through the infinite number of permissions that he could not refuse to grant following the solicitations and importunity of the Princes and Lords who continuously persecuted him, came to see this authority as embarrassing, and wanted to share it in order to have grounds for refusing those who asked him for weapons against humankind. To this end he suggested to our Monarch the idea he had conceived of appointing a Society in charge of examining medicinal specifics.[6]

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[3] "Tel a été l'ordre suivi dans les derniers siècles, au moyen duquel l'empirisme étoit toléré," Jean Verdier, *La jurisprudence de la medicine en France* (Alençon: Malassis le jeune, 1762), 150–151.

[4] Ibid., 152.

[5] "Il est pourtant vrai que l'Empirisme est le premier principe de la médecine, et que hasard et même le Charlatanisme l'ont enrichie de remèdes très-précieux; l'Empirisme ne doit donc point être rejeté tout-à-fait," ibid., 147.

[6] "M. Dodart touché des abus qui se commettoient dans la distribution de ces remèdes, plus touché encore de se voir forcé par le respect humain, de les fomenter lui-même, par le nombre infini de permissions qu'il ne pouvoit refuser à la sollicitation et l'importunité des Princes et des Seigneurs dont il étoit persécuté continuellement, regarda cette autorité comme gênante, et voulut la partager, pour avoir lieu de refuser ceux qui lui demandoient des armes contre le genre humain. Pour cela il suggéra à notre Monarque, l'idée qu'il avoit conçue d'une Société préposée pour l'examen des spécifiques," Ibid., 161–162.

Verdier provides an image of a first physician with his hands tied, imposed upon by various court interests to gratify their respective medical clients by licensing their medications regardless of the fact that many were veritable "weapons against humankind." Although he describes these privileges as infinite in number, Verdier points out that the medical secrets behind most privileged remedies tended to die with their inventors without enriching the art of medicine. Leaving these aside, Verdier cites the two most prominent examples of multi-generational royal support for proprietary remedies vendors: namely, the Helvétius and Contugi families, who have gone on to become commonplaces in the history of medicine in France.[7] Their notoriety and the longevity of their respective monopolies have generated a wealth of documentary evidence in judicial and government archives, some of which was diligently collected and published by late nineteenth- and early twentieth-century historians of pharmacy.[8] The goal of this chapter is to contextualize these prominent cases by looking at the peculiar phenomenon that the 1728 *arrêt* sought to reform, namely, the granting of exclusive sales privileges to the vendors of proprietary "secret" or "specific" remedies. As we shall see, there was indeed cause for Dodart's concerns, but despite his efforts and those of his successor, Pierre Chirac (1650-1732), the granting of privileges continued largely unchanged after the 1728-1731 reform efforts.

This chapter shows that the granting of royal brevets, letters patent, and pensions to the vendors of proprietary remedies in effect constituted a parallel licensing regime, underwritten by royal authority, which offered an alternative to that of the urban

[7] Ibid., 152–160.

[8] See most notably Claude-Stéphen Le Paulmier, *L'Orviétan. Histoire d'une famille de charlatans du Pont-Neuf aux XVIIe et XVIIIe siècles* (Paris: Librairie illustrée, 1893); Louis Lafond, *La dynastie des Helvétius. Les remèdes du Roi.* (Paris: Occitania, 1926).

faculties, colleges, and trade corporations. It also emphasizes the regulation of therapeutic substances, and to a lesser extent, of the tools and workspaces (chymical furnaces and laboratories) which enabled their production. Both topics have as of yet received little attention in the historiography of medical regulation, which tends to focus on practitioner-based licensing.[9]

The chapter takes the 1728 reforms as its point of departure: what state of affairs did it respond to? What kinds of privilege had been granted before 1728? (1) I begin to answer these questions by contextualizing these peculiarly medical privileges within the broader notions of privilege in the Ancien Régime, focusing on the privileges of royal servants, industries, and the phenomenon of "court capitalism." (2) The second section provides a tripartite division of the ways in which the crown could reward or protect vendors. Each of these means is then granted its own section. These include: (3) granting them monopoly privileges over the sale of the drug; (4) providing chymical furnace and laboratory privileges; and (5) granting pensions for the sale and publication of medical secrets. The chapter concludes with a final section (6) which returns to the 1728-1731 reforms to ask whether or not they succeeded in changing the first-physician centered

[9] See most notably Gianna Pomata, *Contracting a Cure: Patients, Healers, and the Law in Early Modern Bologna* (Baltimore: Johns Hopkins University Press, 1998); David Gentilcore, *Healers and Healing in Early Modern Italy* (Manchester: Manchester University Press, 1998); Margaret Pelling, *Medical Conflicts in Early Modern London: Patronage, Physicians, and Irregular Practitioners, 1550-1640* (Oxford: Clarendon Press, 2003); Michele L. Clouse, *Medicine, Government and Public Health in Philip II's Spain: Shared Interests, Competing Authorities* (Farnham: Ashgate, 2011).

Although it never created a central tribunal or bureaucracy to enforce them, France also witnessed kingdom-wide attempts at practitioner-based licensing in this period, culminating in the 1707 Edict of Marly, aimed at standardizing minimum educational requirements in the medical faculties and ensuring that physicians had to present their degrees to local magistrates in order to practice even in towns without medical colleges or faculties: see Laurence Brockliss and Colin Jones, *The Medical World of Early Modern France* (Oxford: Clarendon Press, 1997), 485–499; and Alexandre Lunel, *La maison médicale du roi, XVIe-XVIIIe siècles. Le pouvoir royal et les professions de santé (médecins, chirurgiens, apothicaires)* (Seyssel: Champ Vallon, 2008), 221–234, on the relative ineffectiveness of these attempts.

privilege regime, and to assess the continuities that exist in privilege-granting for secret remedies before and after these reform attempts.

The 1728-1731 reforms have received little attention in the historiography of medicine in early modern France. They are duly mentioned in most major surveys, most recently in Brockliss and Jones, but usually are allotted only a few pages.[10] Even in more specialized works, such as Alexandre Lunel's recent study of the reform efforts of the "royal medical household," scarcely more than four pages are dedicated to the subject.[11] Matthew Ramsey, who has written several important articles tracing the regulation of "secret remedies" in France from the Ancien Régime through the nineteenth century, has likewise only treated the 1728-1731 *arrêts* in passing before moving on to the better-documented regulatory regime of the Société royale de médecine after 1776.[12] Indeed, as the work of Ramsey and of Brockliss and Jones demonstrates, the source of reference for this first attempt to regulate secret remedies is still Maurice Bouvet's short 1922 article on the topic, made up primarily of extensive quotations from the *arrêts* themselves.[13]

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[10] Brockliss and Jones, *The Medical World of Early Modern France*, 628–629.

[11] Lunel, *La maison médicale du roi*, 280–281, 288–289.

[12] Matthew Ramsey, "Traditional Medicine and Medical Enlightenment: The Regulation of Secret Remedies in the Ancien Régime," in *La médicalisation de la société française 1770-1830*, ed. Jean-Pierre Goubert (Waterloo, Ontario: Historical Reflections Press, 1982), 217–218; see also the sequels to this article covering the revolutionary period and the nineteenth century: "Property Rights and the Right to Health: The Regulation of Secret Remedies in France, 1789-1815," in *Medical Fringe and Medical Orthodoxy, 1750-1850*, ed. William F. Bynum and Roy Porter (London: Croom Helm, 1987), 79–105; and "Academic Medicine and Medical Industrialism: The Regulation of Secret Remedies in Nineteenth-Century France," in *French Medical Culture in the Nineteenth Century*, ed. Ann La Berge and Mordechai Feingold, vol. 25, Clio Medica (Amsterdam: Rodopi B.V., 1994), 25–78.

Scholars studying the later eighteenth-century have recently shown that the marketplace for licensed proprietary remedies in France extended beyond drugs to include "health foods" and therapeutic instruments like steel hernia trusses. See Christelle Rabier, ed. *Technology and Culture*, Special Issue: Fitting for Health, 54, no. 3 (2013), esp. "Introduction: The Crafting of medicine in the Early Industrial Age," 437-459 and Liliane Hilaire-Pérez and Christelle Rabier, "Self-Machinery?: Steel Trusses and the Management of Ruptures in Eighteenth-Century Europe," 460–502, on hernia trusses. On health foods see Emma C. Spary, *Feeding France: New Sciences of Food, 1760-1815* (Cambridge: Cambridge University Press, 2014), chap. 4, "Health foods and the medical marketplace," 125–166.

[13] Maurice Bouvet, "Les commissions de contrôle des spécialités pharmaceutiques au XVIIIe siècle," *Bulletin de la Société d'histoire de la pharmacie* 10, no. 35–36 (1922): 88–94, 119–24.

If these reforms have received only passing mention in the existing historiography of medicine in France, the situation surrounding the pre-1728 regime of privilege-granting is even worse: here again, beyond the work on the *cas célèbres* of Helvétius' *remède spécifique* against dysentery and the Contugi family's *orviétan* privilege, the phenomenon is often evoked but has never been explored in any depth. The singular exception to this rule is, once again, the work of Maurice Bouvet, who wrote over three hundred short notices and articles on the history of pharmacy in various periodicals between 1920 and 1963, many of which treated privileged secret remedies. Despite his considerable archival work, however, Bouvet never provided a synthetic analysis of the overall phenomenon of privilege-granting.[14]

There are of course important reasons for the general lack of studies on particularistic privileges in Ancien Régime France, the foremost of which is the absence of concentrated archival fonds, as mentioned in the introduction. There were no efforts to initiate a bureaucratic commission regulating secret remedies until 1728, and no systematic record keeping exists until the creation of the Société royale de médecine in

[14] The closest to a synthesis is Maurice Bouvet, "Histoire sommaire du remède secret," *Revue d'histoire de la pharmacie* 45, no. 153–54 (1957): 57–63, 109–18. Even then, the main goal of the article is to follow legislative changes, rather than to excavating broader social, economic, and intellectual aspects of the phenomenon.

Maurice Bouvet (1885-1964) was a graduate of the École supérieur de Pharmacie de Paris, served as a military pharmacist during the First World War, and spent most of his career working for the drug manufacturer Les établissements Goy (initially a manufacturer of capsules and tablets, later famous for its M.B.C. throat pastilles), becoming president of its administrative council from 1940 until his death in 1964. He was also a regular contributor to the *Revue d'histoire de la pharmacie* and other French pharmaceutical and medical journals (for which he provided short historical notices) and was president of the Société d'histoire de la pharmacie from 1945 until 1964. On Bouvet's career see the special issue of the *Revue d'histoire de la pharmacie* (vol. 73 no. 267), which includes a series of biographical articles and a useful bibliography: Pierre Julien, "Bibliographie des publications de Maurice Bouvet," *Revue d'histoire de la pharmacie* 73, no. 267 (1985): 325–61.

NB: Bouvet's articles are often split into installments across several issues of the same publication, sometimes with slight variations in titling (and usually followed by "suite" or "suite et fin"), which tends to complicate citation. In several cases, the same articles are published in multiple periodicals (e.g. many from the *Courrier médical* can also be found in *La pharmacie française*). See the Julien bibliography mentioned above for the concordance of these versions.

1776. Consequently, the records of medical regulation and litigation in Paris are mixed *pêle-mêle* within voluminous judicial and administrative fonds, a fact which makes their systematic examination more difficult, but not impossible.

### 1. *Privilege in Ancien Régime France*

Monopoly privileges over specific remedies stand as a peculiarly medical expression of the much broader phenomenon of economic privilege-granting in this period, both in France and throughout Europe.[15] Furetière's *Dictionnaire* (1690) defines privilege as "a particular advantage enjoyed by one person to the exclusion of many others, which comes to him by the benefaction of his sovereign."[16] The granting of privileges was an attribute of royal sovereignty. They were held by individuals, but also by collective entities such as corps, orders, and estates, as well as provinces, cities, and seigneuries. Privileges were the ties that bound the king and his subjects, either directly or in a mediated way through their membership in corporate bodies ranging from religious orders to provincial estates, municipal governments, and trade guilds. In concrete terms, privileges permeated every part of an individual's social and economic status, from occupation, tax status, obligations for military service and billeting, to political rights, eligibility for given offices, costume, and the right to carry a sword.[17] As Michael Fitzsimmons has aptly put it, "Under the old regime, privilege was a primary

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[15] An ongoing project supported by the Agence nationale de la recherche, entitled "Les privilèges économiques en Europe, XVe-XIXe siècles: étude quantitative et comparative," directed by Dominique Margairaz, promises to shed light on the broader European phenomenon of privilege granting through the creation of a database of economic privileges from the fifteenth to the nineteenth century, including France, England, Germany, and Italy.

[16] "Un avantage particulier dont jouit une personne à l'exclusion de plusieurs d'autres, qui lui vient par le bienfait de son souverain." This definition is closey followed by the 1694 *Dictionnaire de l'Académie* as well as the first sentence of Diderot and d'Alembert's *Encyclopédie*, although much of the rest of the article is a critique of abuses of privilege.

[17] For an excellent description of how privilege flows socially and economically through corps, orders, and estates, see Gail Bossenga, *The Politics of Privilege: Old Regime and Revolution in Lille* (Cambridge: Cambridge University Press, 1991), 5–7.

instrument of government and the chief medium of political exchange between the Crown and the corporate entities that comprised much of French society."[18]

A number of privileges were closely associated with service to the royal household. These included the privileges of royal medical practitioners, such as the privilege to practice in Paris and anywhere else that the royal court was based (and in spite of any local corporate privileges that might otherwise preclude such practice). As the court became increasingly sedentary at palaces in the vicinity of Paris, Fontainebleau, and Versailles, these privileges became, in effect, a way of both sidestepping the privileges of the University of Paris Faculty of Medicine and the guilds of surgeons and apothecaries, and gaining access to the lucrative Parisian medical marketplace without the hassle of submitting to examination and paying exorbitant fees to the local corporations.[19]

The personal exemptions to corporate regulation that were provided to courtly medical practitioners were part of a larger set of economic privileges granted to merchants and artisans who served the royal household, from artisans such as breadmakers, tailors, and wigmakers to musicians, stable masters, palace guards, and wolf-catchers, who fell under the legal category of *domestiques commensaux*, servants of the king who "shared his table" (usually in a purely figurative sense).[20] Their privileges included concrete economic benefits such as exemption from numerous taxes or other duties like troop billeting, and the right to do business in the city without impediment

[18] Michael P. Fitzsimmons, *The Night the Old Regime Ended: August 4, 1789, and the French Revolution* (University Park, Pa.: Pennsylvania State University Press, 2003), 18; Michael P. Fitzsimmons, *The Remaking of France: The National Assembly and the Constitution of 1791* (Cambridge: Cambridge University Press, 1994), 4–5.

[19] Lunel, *La maison médicale du roi*, 87–92.

[20] See Sophie de Laverny, *Les domestiques commensaux du roi de France au XVIIe siècle* (Paris: Presses de l'Université de Paris-Sorbonne, 2002).

from the local guilds and to decorate their shops with *fleur de lys* and the arms of the Prévôté de l'Hôtel du Roi.[21] Along with these privileges and access to all the potential connections available at the royal court, exemption from urban guild regulation was in fact one of the key incentives for taking on such positions, as their actual wages were sometimes relatively modest.

Royal privileges were also granted to commercial and industrial interests. Alongside the royal manufactures for military supplies (weapons and munitions) and luxury goods (tapestries, porcelain, glass), a host of smaller inventors and producers were granted privileges to produce steel, iron, copper, and lead, and for machines they had invented for everything from textile production and grain winnowing to Blaise Pascal's calculators.[22] The granting of royal industrial privileges was part of the larger complex of economic policies that historians have called mercantilism, closely associated in French historiography with Louis XIV's famous Controller General of Finances, Jean-Baptiste Colbert. Although privilege-granting as an industrial policy dates back to Henri IV, and royal privileges also defined the medieval trade corporations, the practice of granting limited-term privileges to develop industries greatly accelerated under Colbert's tenure as Controller General of Finances (1665-1683) and Secretary of State for the Royal Household (1669-1683), and continued into the eighteenth century.[23] In the eighteenth

[21] Ibid., 111–126.

[22] See especially Liliane Hilaire-Pérez, *L'invention technique au siècle des Lumières* (Paris: Albin Michel, 2000), which compares invention and monopoly in France and England. See also Pierre Deyon and Philippe Guignet, "The Royal Manufactures and Economic Progress in France before the Industrial Revolution," *Journal of European Economic History* 9, no. 3 (1980), 611-632; and the still useful survey of privileges provided by Paul-Martin Bondois, "L'organisation industrielle et commerciale sous l'ancien régime: le privilège exclusif au XVIIIe siècle," *Revue d'histoire économique et sociale* 21, no. 2 (1933): 140–89. For the 1649 calculator privilege see Blaise Pascal, *Oeuvres complètes de Blaise Pascal*, vol. 3 (Paris: Hachette, 1865), 194–196.

[23] Deyon and Guignet, "The Royal Manufactures," 619; for royal industrial privileges under Henri IV, see Henry Heller, "Primitive Accumulation and Technical Innovation in the French Wars of Religion,"

century, they were managed by the Bureau de commerce, which delegated experts (often members of the Académie royale des sciences) to inspect inventions and decide whether privileges should be allotted.[24] The goals of such policies were various. To begin, such privileges were usually granted with a limited term of between ten and twenty years. The rationale was not to create a perpetual monopoly but simply to ensure a fair return on what were sometimes costly ventures for the inventor and financial backers.[25] In a broader sense, these privileges also aimed to provide the necessary protections until the industry was well-established domestically, above all to make sure that it was not outcompeted by imports, which mercantilist policy sought to minimize as much as possible. The first rationale, that of ensuring a fair return on investments for innovators, appears explicitly in the text of many of the privileges analyzed below. As for the second rationale, avoiding import dependency on important plant substances like cinchona bark and ipecacuanaha had both mercantilist and military overtones. As we shall see in the case of the *poudre fébrifuge*, strategic concerns over the cost and supply of exotic plant substances could serve as a powerful motive for both the state and medical entrepreneurs to develop indigenous European equivalents.

These newer privileges also had the effect of weakening the long-standing privileges of the trade corporations, which dated back to the Middle Ages. As Prosper Boisonnade put it in his classic study of Colbert, "In order to grow amidst the hostility of

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*History and Technology* 16, no. 3 (2000): 243–62; for a European-wide sketch of the phenomenon, with a special emphasis on Venice, see Luca Molà, "Inventors, Patents and the Market for Innovations in Renaissance Italy," ed. Anna Guagnini and Luca Molà, *Italian Technology from the Renaissance to the Twentieth Century* 32 (2014): 7–34.

[24]On the Bureau de commerce and invention see Hilaire-Pérez, *L'invention technique*; and Philippe Minard, *La Fortune du colbertisme: état et industrie dans la France des Lumières* (Paris: Fayard, 1998). Although it regulated the allotment of privileges to numerous other varieties of invention, the Bureau de commerce appears not to have been involved in pharmaceutical privilege-granting.

[25] Prosper Boissonnade, *Colbert, le triomphe de l'étatisme: la fondation de la suprématie industrielle de la France, la dictature du travail (1661-1683)* (Paris: M. Rivière, 1932), 43.

the guilds, new enterprises needed the protection of the state: to oppose corporate monopoly, the state introduced another kind of monopoly: the privilege."[26] This play of privilege against privilege served the centralizing goals of the absolutist monarchy, replacing the more mediated local bonds of traditional corporatism with new direct bonds between the monarch and the privilege holders, juxtaposing a layer of new agents directly loyal to the crown on top of the older layers of municipal or corporate privilege. There can be little doubt that the granting of monopoly privileges over secret remedies eroded existing corporate medical privileges, particularly those of apothecaries, and the expediency of such privileges for the military goals of the centralizing state is particularly apparent, as we shall see in the cases of the Helvétius and Guiller-Lajutais families.

Jeff Horn has recently developed the theme of privilege granting as a tool of state-sponsored economic development in the last century and a half of the Ancien Régime. Horn has pointed to the ways in which French officials, in "a fit of 'beautiful madness'" deployed privilege to encourage economic development: on the one hand, new "privileges of liberty" could be used to minimize risk in innovation for entrepreneurs, and how "liberties of privilege" could be used to exempt their holders from other *existing* privilege that were economically cumbersome.[27] Horn's "beautiful madness" of privilege granting is closely linked with what other scholars have called "court capitalism" to describe the ways in which capitalism operates under the conditions of absolutism where

[26] "Pour grandir au milieu de l'hostilité des jurandes [guilds/corporations], il faut aux entreprises nouvelles la protection de l'État [...] Au monopole corporatif, il oppose donc un autre monopole: le privilège," ibid., 42.

[27] Jeff Horn, *Economic Development in Early Modern France: The Privilege of Liberty, 1650-1820* (Cambridge: Cambridge University Press, 2015), 3–5.

The French phrase is "beau délire." It comes from a 1778 *Avis* of the deputies of commerce to the director general of finances, Jacques Necker, where it is in fact used to describe "unlimited liberty" of commerce. See Horn's article, "'A Beautiful Madness': Privilege, the Machine Question and Industrial Development in Normandy in 1789," *Past & Present* 217, no. 1 (2012): 149–85, 162.

markets are shaped to meet the ramshackle needs of the fiscal-military state. As Gail Bossenga has defined it, expanding on the earlier usage of George V. Taylor, "court capitalism" entailed the venality of state offices, the farming out of important functions such as tax collection, and the creation of powerful state-sponsored monopolies, all centered on the royal court as their prime sphere of negotiation.[28] Monopoly privileges for secret remedies, particularly those which were tied to military interests, are one thread in this larger tapestry where state goals converged with those of private entrepreneurs.

Before moving on to survey the medical privileges themselves, it is useful to address one final contextual question: given the close link between monopoly and innovation that the secret remedy privileges embody, can they be said to be a sort of Ancien Régime pharmaceutical patent? Answering this question requires an appreciation of the peculiarity of modern notions of intellectual property. According to Mario Biagioli, despite these superficial similarities, privileges and patents have significant differences which grow out of their embeddedness in radically different political forms, namely absolutism and liberal democracy.[29] Privileges were "gifts" that sovereigns bestowed on their subjects, while patents emerge from the liberal notion of intellectual property and Enlightenment commitments to the dissemination of knowledge. Alongside the question of "gift-of-the-sovereign" vs. "right-of-the-citizen," the key to the modern "patent bargain," which emerged in France and the United States but has since spread to the rest of the world, is the specification requirement: an inventor must disclose to the public (via

[28] Gail Bossenga, "Markets, the Patrimonial State, and the Origins of the French Revolution," *1650-1850: Ideas, Aesthetics, and Inquiries in the Early Modern Era* 11 (2005): esp. 460–464; George V. Taylor, "Types of Capitalism in Eighteenth-Century France," *The English Historical Review* 79, no. 312 (July 1, 1964): 478–97.

[29] Mario Biagioli, "Patent Republic: Representing Inventions, Constructing Rights and Authors," *Social Research* 73, no. 4 (2006): 1150–72.

the patent bureaucracy) the full details of their invention in exchange for the legal and financial protections of a temporary monopoly. Privileges, by contrast, did not require a public disclosure of the secret behind an invention, proof that it was in fact novel (that is, that it was not taking something away from the public that it already had), technical examinations or testing, and "specification" understood as a kind of textualization of the invention into a series of instructions that ensured its reproducibility by "a person reasonably skilled in the art." Patents were in fact explicitly constructed against earlier privilege regimes: as Biagioli puts it, specification requirements were what made the patent bargain "politically defensible by distancing it from the 'odious monopolies' of the Ancien Régime."[30] Likewise, a patent is an attempt to legally define the "idea" of an invention through representation (textual or diagrammatic) that could be examined and managed by a bureaucracy, whereas privileges were more often than not closely tied to actual material inventions, including real substances, working models, and even miniatures.[31]

Biagioli builds a stark divide between absolutism and republicanism, Ancien Régime and modern liberal democracy; as he himself admits, his approach is "more archaeological than historical."[32] The case of pharmaceutical privileges in France points instead to a more gradual transition between privilege and patent. As we shall see, certain features of specification began to emerge between 1728-1731, well before the end of the Ancien Régime and even before the height of the Enlightenment at mid-century.

Secret remedy privileges can be seen as the offspring of these two other forms of privilege, namely the privileges held by servants of the royal household (including its

[30] Ibid., 1136.
[31] Ibid., 1156–1159.
[32] Ibid., 1159.

medical practitioners) and the industrial privileges granted by Colbert and his successors. The two are even bound together on a functional level: in fact, some vendors began as courtly medical practitioners and leveraged their positions to gain additional privileges for the sale of secret remedies. Desiderio Descombes, the first Parisian vendor of *orviétan*—perhaps the most famous secret remedy of the Ancien Régime—held a privilege as an "Opérateur et distillateur ordinaire du roi." Adrien Helvétius's exclusive privilege for his *remède spécifique* depended on the hospital trials he was able to secure thanks to his existing court connections, and after he gained his pharmaceutical privilege he was able to acquire an appointment as physician to the Duke of Orléans.[33] Access to the royal court was a crucial condition for acquiring medical privileges, and one privilege tended to beget another.

The comparison of secret remedy monopoly privileges to industrial privileges is likewise instructive. Both often emanated from the same source, namely the Secretary of State for the Royal Household (*Secrétaire d'État de la Maison du roi*), and can often even be found alongside one another in the ministerial dispatch registers. It should of course be acknowledged that the production of secret remedies, even in the significant volumes demanded by the military and other "corporate consumers" was probably far less capital-intensive and smaller in scale than, say, casting cannons. Like mechanical or metallurgical privileges, however, pharmaceutical privileges are legal monopolies identified with the exclusive production and sale of an invention or product. Although there is a tendency to treat medicine as a distinct sphere, medical subjects should not only be compared temporally and geographically (across different medical licensing regimes for instance) but also to contemporary non-medical phenomena. Medicine often operated

[33] See below, ch. 4.

in ways which were basically analogous to other economic activities: the royal medical practitioners can be placed alongside the other privileged servants of the royal household, and pharmaceutical privileges bear some resemblance to other industrial privileges. The cases of Helvétius and Guiller likewise demonstrate that the military-medical contracting played out in analogous ways to other fields of military supply: eighteenth-century military rationality demanded increasingly standardized tools and supplies in ever growing quantities, and medications have a place in this story alongside food, muskets, cannons, powder, and shot.

The royal privileges granted to the *domestiques commensaux* and to various *manufactures* provide useful background for understanding what Brockliss and Jones have called "the new forms of medical entrepreneurialism which spanned the traditional divide between orthodox practitioners and 'empirics' or charlatans'" and which they associate with the Enlightenment.[34] New commercial imperatives and a new clientele (the state) help explain this erosion of boundaries. My suggestion here is that these entrepreneurs played a role in the medical dimension of some much larger early modern historical developments, including the erosion of medieval corporatism through new economic privileges and the rise of the fiscal-military state. These themes will be developed in greater detail in the following chapters. In the meantime, the best way into the world of medical privileges in this period is by examining the privileges themselves.

*2. Three varieties of pharmaceutical privilege*

By the last quarter of the seventeenth century, the crown regularly granted privileges to support the vendors of "secret" or "specific" medications in three principal ways: (1) it could grant a monopoly, leaving the exclusive sale of a given medication in

[34] Brockliss and Jones, *The Medical World of Early Modern France*, 622.

the hands of a given individual, either for a defined period with renewal conditions, or life-long with the possibility of inheritance, sale or transfer; (2) it could provide the legal right to maintain a furnace and chymical laboratory for the purpose of producing medications; and finally, (3) the crown could (in effect) purchase a medical secret (disclosing it either to the first physician or publishing it for the benefit of the kingdom) in exchange for a fixed annual pension, payable to the "owner" of the secret and his heirs. For the sake of simplicity, I will refer to these three modes as (1) exclusive-sale privileges, (2) laboratory privileges, and (3) pensions.

In total, I have assembled a corpus of sixty pre-1728 medical privileges and pensions allotted or the disclosure of a medical secret. I have included privileges within the corpus only when I was able to obtain a full copy of the operative letters patent, brevet, or certificate.[35] With that said, it seems unlikely that this corpus represents anything more than a mere fraction of the privileges which were actually granted during this period, as the considerations in Appendix 2 make clear. Many of those which I have assembled are in fact explicitly described as renewals of earlier privileges which have not survived. There are also further limits to the representativeness of the corpus due to gaps in the principal fonds in which copies of the privileges have survived, the dispatch register of the Secretary of State for the Royal Household (series $O^1$) and the registers of the Prévôté de l'Hôtel ($V^3$). With the exception of a single *orviétan* privilege from 1625 and two laboratory privileges for 1646 and 1663, all of the pre-1728 privileges I have

[35] This more than doubles the corpus of pre-1728 privileges identified by Bouvet. Restricting our count to cases where an actual privilege is cited (rather than simply attested by a another source), in the four articles cited above Bouvet had identified copies of seven exclusive sale privileges in series $O^1$ and $V^3$; nine laboratory privileges (including two from outside of the sources I examined); and six pensions, for a total of twenty-two medical privileges.

found are dated after 1670, as very few records have survived from the Secretary of State for the Royal Household before 1669.

To provide some idea of the distribution of these three types of privilege at the outset, the pre-1728 corpus I have assembled is made up of forty-six exclusive-sale privileges, ten laboratory privileges, and six pensions.[36] The exclusive-sale privileges thus predominate, comprising over 3/4 of the privileges under study.

Before the bureaucratization of privilege-granting for secret remedies under the Société royale de médecine in 1776, all letters patent and brevets were granted through the authority of the Secretary of State for the Royal Household on behalf of the king and on the recommendation of his first physician. This recommendation is often, but not always, mentioned in the text of the privilege itself. To the best of my knowledge, there are no documented efforts to develop a systematic process of examination before 1728. The corpus I have assembled represents a series of privileges granted on an *ad hoc* basis, not an organized regulatory bureaucracy or judicial authority. In the absence of a dedicated fonds, I have had to painstakingly extract these privileges from the voluminous dispatch registers of the Secretary of State for the Royal House (see Appendix 2: Sources and Methodology). The diverse responsibilities of the Secretary of State for the Royal Household in this period included not only overseeing the royal household itself, but also the city of Paris (in collaboration with the Lieutenant General of Police), the general administration of the interior provinces, and overseeing a host of royal institutions,

[36] The total here exceeds sixty because Helvétius' privilege is counted twice: he received a joint privilege granting him both exclusive sale of his remedy as well as the right to have a laboratory.

including the Collège royal, the Bibliothèque du Roi, the Jardin du Roi, the Imprimerie royale, and the various Académies.[37]

Pharmaceutical privileges typically take the form of brevets and letters patent. While most of the texts I have examined are transcriptions from the dispatch register, the original letters patent and brevets were written on large sheets of parchment (see Appendix 3, Figure 1). As guarantees of their authenticity, letters patent included both the signatures of the Secretary of State and the king as well as a prominent yellow wax seal from the royal Chancellor, while brevets included only the two signatures, without any seal. Brevets and letters patent were of course not types of document specifically produced for the granting of medical privileges of the kind that interest this dissertation; they were in fact used for all varieties of royal orders, permissions, and privileges, as we shall see below.[38]

Beyond these physical differences, the brevets and the letters patent each follow a distinct textual formula. Letters patent begin as follows: "Louis by the grace of God King of France and Navarre to our beloved and loyal counselors in the courts of our Parlements, bailiffs, seneschals, their lieutenants and to all other officers and upholders of the law to whom it concerns, Greetings."[39] The letters subsequently refer to the bearer of the privilege as "Our well-beloved subject" and recount how he or she "has very humbly petitioned us" (*nous a remonstré très humblement*) to provide them with protection for their remedy, which is then observed to be very useful against a given disease or

[37] Bernard Barbiche, *Les institutions de la monarchie française à l'époque moderne (XVIe - XVIIIe siècle)* (Paris: Presses Universitaires de France, 2012), 239–251.

[38] For an introduction to letters patent and brevets, see Ibid., 166–170, 190–191.

[39] "Louis par la grâce de Dieu Roy de France et Navarre à notre aimez et féaux conseilleurs dans nos cours de parlement, baillis, sénéchaux, leurs lieutenants et a toute autres nos officiers et justiciers qu'il appartiendra, Salut."

condition, and sometimes to have been tested or to have met with the approval of the first physician. This is followed by a series of specific provisions surrounding duration, fines for counterfeiters, advertising rights, and permission to subcontract, which I will describe in greater detail below.

Brevets, by contrast, begin less formally with the word "Today" (*Aujourd'huy*) and provide the date, and the location of the king (usually Versailles or Fontainebleau). They then specify that the king has been "well informed" of the remedy or reputation of the vendor, with the first physician often mentioned as his source. In consequence of these favorable reports, the brevet then states that the king has elected to permit the vendor to sell his or her remedy at Paris and in all parts of the kingdom, or, in the case of pensions (which are always dispensed via brevets), it specifies a set annual figure, "to be paid throughout his life by the keepers of his Royal Treasury present and future." In the case of exclusive-sales privileges, the brevets tend to be much shorter than letters patent and provide fewer specifications on the protections afforded by the privilege (most notably, they do not always provide a set fine for infractions). Historically, the issue of royal brevets was simply a provisional step taken before full letters patent were issued, and as such they were "legally imperfect."[40] By the early modern period, however, they had become, "the form which, above all others, was suited to liberalities, and to the distribution of rewards and favors," and were no longer superseded by subsequent letters patent.[41] But for the purposes of medical brevets, I have found no evidence that they were treated any differently than letters patent: beyond the difference in formula, the main

[40] Barbiche, *Les institutions de la monarchie française*, 190–191.

[41] "Le brevet […] est la forme par excellence qui convient aux libéralités, à la distribution des récompenses et des faveurs," Georges Tessier, *Diplomatique royale française* (Paris: A. et J. Picard et Cie, 1962), 313.

difference between the two seems to be that letters patent provide more detail in specifications than the brevets.

The third type of document, certificates from the first physician, usually surround mineral waters, medicinal syrups, or oils. Rather than being stand-alone privileges of their own, they are dependent upon a privilege held personally by the first physician, who also held the title of superintendant of mineral and medicinal waters in the kingdom.[42] As such, the permissions to sell mineral and medicinal waters in Paris and elsewhere were granted by virtue of his own letters patent as superintendent. In other cases, such as that of Cosme Damien Barré's 1678 laboratory privilege, the certificate from the first physician was a temporary authorisation for six months, registered with various courts, and then replaced before the elapsed time by genuine letters patent.

With a single exception, that of the brevet granted to Ferdinand Guiller in 1713, the texts of the letters, brevets, and certificates assembled in my corpus are all taken from transcriptions in dispatch registers or *registres d'entregistrement*.[43] The originals would of course have been kept by their holders, and as such have disappeared. They appear periodically in images of charlatans from the period, however, and the original parchment certificates, with dangling seals, would have served as material guarantors of the medical legitimacy of their holders, alongside the medallions they were occasionally given by civil authorities (see Appendix 3, Figures 11 and 12).[44]

[42] Lunel, *La maison médicale du roi*, 192–200, 208–209, 319–322.

[43] For the original Guiller brevet, see AN $V^7$ 246 (6) dossier 3, item 2. The preservation of this brevet is a historical accident. See below, ch. 5, sect. 1 and Appendix 3, Figure 1.

[44] See below, ch. 3, sect. 3, on the golden medallion which the charlatan Christophe Polony received along with his privileges from the Languedoc Estates in 1654.

### 3. *Exclusive-sales privileges for secret remedies: protections and conditions*

Beyond these formal divergences, the most important details of the privileges in both brevets and letters patent are broadly similar among the exclusive-sales privileges (see Appendix Table 1 for a list of the privileges). All exclusive-sales privileges grant the bearer the right to sell his or her remedies—regardless of whether or not they hold any formal medical qualifications—to the exclusion of all others, including physicians, surgeons, and apothecaries. Most, however, also specify other conditions, rights, and obligations. This section provides a breakdown of how these and other features are distributed within the corpus, including the most common types of drugs for which privileges were granted; the duration of the privilege, the penalties specified for counterfeiters; the presence or absence of rights to establish franchises or sub-contractors to sell the substance on the vendor's behalf; provisions for advertisements, including the right to use the royal arms as a trade mark (a common privilege for merchants following the court); and, finally, various conditions sometimes attached to the privileges. These conditions sometimes included organized clinical testing (occasionally in hospitals), price-fixing or the creation of special exceptions to the monopoly for military hospitals, and, much more rarely, the provision of notarized cure certificates as a condition for the privilege's renewal.

#### *3.1. Varieties of remedy*

What kinds of medications were protected by privileges in the France of Louis XIV and XV? Antidotes form the largest contingent, with a total of twelve (nearly ¼ of the total), including *orviétan*, the *antidote de France* of Pierre Obelin de Quercetan, and

other *contrepoisons*.[45] Five of these are renewals of the Contugi *orviétan* privilege, but even excluding these, antidotes would be tied with venereal disease remedies as the most numerous type of remedy in the corpus. The prominence of antidotes is hardly surprising given their important uses against plague, rabies, snake-venom, and intentional poisoning with chemical substances like arsenic, as well as their prominent place in the history of medicinal specifics.[46]

In second place following antidotes are seven drugs against venereal disease, which are especially prevalent in the early decades of the eighteenth century.[47] Next are febrifuges (three privileges), followed by cancers remedies, hernia plasters, and Helvétius' dysentery specific, which occupy two privileges each.[48] Disease categories with only a single remedy include gout, rheumatism, hydropsy, and apoplexy. The remainder either do not specify a condition to which the remedy responds, or list a variety of complaints. Three, for example, are for elixirs whose exact purposes remain unspecified in the text of the privileges. Some were panaceas, most notably the famous "Elixir de Garrus" devised by the Montpellier doctor Joseph Garrus, a panacea supposedly based on Paracelsus' *elixir proprietatis* and containing an array of exotic simples from the Indian Ocean.[49] Seven remedies fall under the category of mineral waters, syrups, and oils. Perhaps the most unusual of these is the "Gabian oil" sold by

[45] See Appendix 1, Table 1: Descombes (1625), Contugi (1686, x2), Obelin de Quercetan (1689) Lescot (1689), Contugi (1694), Contugi (1700), Contugi (1716), Fournier de la Flotte (1716), Toscano (1716), Gerauldy (1721) and Toscano (1727).

[46] See below, ch. 2 and 3 for the role played by antidotes as models for the kind of therapeutic action assigned to medicinal specifics in the later seventeenth century.

[47] See Appendix, Table 1: Montroche (1693), Meunier (1715), Legrand (1716), Frechon (1721), Granger (1722), Huber (1725), and Mauman (1727).

[48] Ibid. For febrifuges, see Auby (1683) and Guiller (1713 and 1724); for cancer treatments, see Alliot (1683) and Jouen (1691); for hernia plasters, see Veuve de Jean de Vaux (1700) and Bols (1722).

[49] The elixir was made up of aloe from the island of Socotra (south of the Arabian peninsula), saffron, myrrh, Ceylonese cinnamon, cloves and nutmeg. See Pierre Labrude, "L'elixir du Docteur Garrus. Medicament ou liqueur de table? Formule originale ou imitation?" *Histoire des sciences médicales* 41, no. 3 (2007): 315–16.

Sébastien Matte La Faveur (1629-1714) and Jean-Baptiste Daumont, which was in fact petroleum from a natural seep near the town of Gabian in the Languedoc, first discovered in 1608 and commercialized by the local bishop. The petroleum was ingested or used topically against a variety of illnesses including gout, asthma, tumors, gall, or skin problems.[50] Among other non-plant-based substances, there is an instance of potable gold in the form of the "drops" (*gouttes*) of the General La Motte.[51] Where some remedies are left vague in their applications, others are very precisely defined: for example, Gerauldy's "opiate for use during dental operations," and Roger Lasalle's "remedy against calluses and inflations in the neck of the bladder."[52] Many of these remedies appear to have been based on plants native to metropolitan France. Canada (maidenhair ferns), Brazil (ipecacuanha), Peru (cinchona bark), and the islands of the Indian Ocean (aloe, spices such as saffron, cinnamon, cloves, nutmeg) are among the most exotic sources for the simples which entered into these proprietary remedies.

*3.2. Duration of privilege*.

Laboratory privileges and pensions appear to have been life-long, and make no specifications on duration. Likewise, the exclusive sales privileges typically do not provide a duration, with some notable exceptions: two that I have found indicate a provisional trial period of one year or less, after which time the holder must return and provide proof—in the form of official certificates from medical personnel—attesting to

[50] See Cécile Raynal, "Le Gabianol, huile de Gabian," *Revue d'histoire de la pharmacie* 93, no. 348 (2005): 655–58; Robert Jacobus Forbes, *Studies in Early Petroleum History* (Leiden: Brill, 1958), 1–12; Maurice Bouvet, "L'huile de Gabian," *Revue d'histoire de la pharmacie* 27, no. 105 (1939): 5–12.

[51] On La Motte, see below in this chapter, esp. section 5; see also Maurice Bouvet, "La spécialité pharmaceutique au XVIIIe siècle : Les gouttes du général de la Motte," *Revue moderne de pharmacie* 12, no. 1 (1922): 7–15. On potable gold, one of the most powerful symbols of medical alchemy in the Middle Ages, see Chiara Crisciani and Michela Pereira, "Black Death and Golden Remedies: Some Remarks on Alchemy and the Plague," in *The Regulation of Evil: Social and Cultural Attitudes to Epidemics in the Late Middle Ages*, ed. Agostino Paravicini Bagliani and Francesco Santi (Florence: Sismel, 1998), 7–39.

[52] See Appendix 1, Table 1: Gerauldy (1700) and Lasalle (1716).

the effectiveness and celebrity of their remedy in order to be awarded a more long-term privilege.[53] Two others specify a fifteen-year duration, and three specify a twenty-year duration.[54] Only four of the remaining thirty-five exclusive-sale privileges explicitly specify that the privilege is to be held "as long as he/she lives" (*sa vie durant*), but in practice all privileges without a specified time-limit appear to have been treated as life-long privileges.[55] In many cases they were extended even further, being renewed by successors, typically widows and descendants.

*3.3. Penalties for counterfeiters and adulterators*.

The exclusive-sales privileges consistently specify that their bearers should be "neither troubled nor impeded" in the exercise of their privilege, often singling out physicians, surgeons, and apothecaries specifically as the source of potential challenges.[56] Many also specified a penalty for counterfeiting or adulteration, "under pretext of augmentation, reduction, or some other change" (*sous pretexte d'augmentation, diminution ou autre changement*). The most common penalty being the seizure of the counterfeited drugs, the payment of legal costs and damages, and, in some cases (eighteen out the forty-six pre-1728 exclusive-sales privileges) a specified fine of between 1,000 and 3,000 *livres tournois*, to be split evenly in half or into thirds (see Appendix 1, Tables 4 and 5). For example, one common model splits the fine three ways, with one third for the king, one third for the bearer of the privilege, and one third for the

[53] See Ibid., Barré (1678) and Fronville (1700).

[54] See Ibid., for fifteen-years, see Helvétius (1688) and (1703); for twenty-years, Guyet (1688), Leroux (1693) and Leroux/Lasalle (1716).

[55] Ibid., Contugi (1694), Contugi (1694), Toscano (1716) and Fournier de la Flotte (1716).

[56] "Fait Sa Majesté très expresses défenses a tout Médecin, Chirurgien, Apotiquaire et à toutes personnes de quelque qualité et condition qu'elles soient de luy donner aucun trouble ny empeschement." The June 29, 1716 privielge of Pierre Le Grand for his venereal disease remedy went a step further with proscrptions against other proprietary vendors as well: "Faisant defenses à toutes Medecins, Chirurgiens, et apotiquaires de luy donner à cet égard aucun trouble ny empechement mesme sous pretexte des privileges qu'ils pourroitent avoir obtenu pour la guerison des memes maladies," $O^1$ 60, fol. 95v.

nearest Hôtel-Dieu. Three even provide a reward for the "denonciateur" who reported the infraction.

*3.4. Franchise rights*

Fines were steep for counterfeiters, but at least some of the vendors of proprietary remedies seem to have been willing to share the wealth with authorized distributors if it meant expanding their markets. One specification that crops up rarely (only six times) within the pre-1728 corpus but that would become crucial in later privileges is the allowance for what might be called "franchises" or "subcontractors," as in Helvétius' 1688 privilege, which permitted him "to have whichever persons he should see fit to distribute his specific in his name," and in others which note that the remedy can be sold only by the holder or the brevet or someone else with their "express permission." In other cases, franchise vendors are simply implied by provisions for multiple *boutiques* or *bureaux de distribution*, as in the case of Guiller's 1713 febrifuge privilege.

One of the most notable instances of long-distance franchising is that of the Montpellier chymist Sébastien Matte La Faveur and his Parisian distributor, Jean-Baptiste Daumont.[57] Matte La Faveur had fought against the restrictions of the Montpellier apothecaries' corporation and gained a local privilege from the Parlement of Toulouse in 1663, enabling him to practice chymistry and produce "essences, waters, and oils." He became a prominent iatrochemist and chymical "demonstrator" to the students of the Montpellier Faculty of Medicine, publishing a *Pratique de chymie*, dedicated to the

[57] See Michel Bougard, "La *Pratique de Chymie* de Sebastien Matte La Faveur : un épisode méconnu des démonstrations publiques de chimie au XVIIe siècle," in *Alchemy, chemistry and pharmacy: Proceedings of the XXth International Congress of History of Science (Liège, 20-26 July 1997)*, ed. Michel Bougard, De diversis artibus, 61 (Turnhout: Brepols, 2002), 77–98; Roy G. Neville, "The *Pratique de Chymie* of Sébastien Matte La Faveur," *Ambix* 10 (1962): 14–28.

royal first physician Antoine Daquin, in 1677.[58] Matte La Faveur was famous for his Queen of Hungary water—allegedly based on a recipe devised by a fourteenth-century Hungarian queen—which he advertised as effective against gout, paralysis, rheumatism, various obstructions, bad breath, and burns.[59] In 1678 he obtained a joint privilege with his Parisian distributor, Daumont, which permitted them to supply Queen of Hungary water and other medicinal waters to courtly and Parisian clients.[60] These privileges were granted personally by the authority of Daquin, by virtue of his own prerogative over the kingdom's mineral waters. The other substances included in the privilege were mineral waters from the spring of Sète in the Languedoc, the aforementioned Gabian oil,[61] and capillary (maidenhair fern) syrups from Montpellier and Canada.[62] With the exception of the Canadian capillary syrup, most of these products were from Provence or the Languedoc, and Matte La Faveur collaborated with Daumont to bottle and transport them to Paris and Versailles for courtly clients which included the famous courtly epistolarist Madame de Sévigné.[63]

In the post-1728 period, the proprietary remedy franchising phenomenon would reach new heights with Pierre Dionis, doctor regent in the Paris Faculty and purchaser of the *orviétan* privilege from the Contugi family. Dionis' 1741 privilege, issued jointly in

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[58] Sébastien Matte la Faveur, *Pratique de chymie, divisée en quatre parties* (Montpellier: Daniel Pech, 1671).

[59] J. Worth Estes describes this substance as an antispasmodic made of rosemary distilled in wine. See "Hungary (Queen of ) Water," in J. Worth Estes, *Dictionary of Protopharmacology: Therapeutic Practices, 1700-1850* (Canton, MA: Science History Publications, USA, 1990), 97; Bougard, "La *Pratique de Chymie* de Sebastien Matte La Faveur," 83–84.

[60] AN $V^3$ 189, fol. 10 r°-v° (8 August 1678). See also $V^5$ 1245, 118r°-121v° (January14, 1682)

[61] See above in this chapter, section 3 "Varieties of remedy."

[62] A syrup used against coughs and other lung conditions and as an aperitif; also held to be capable of provoking menstruation. The Montpellier variety was eventually outmoded by the Canadian variety, which was beleived to be more effective. See Stéphanie Tésio, *Histoire de la pharmacie en France et en Nouvelle-France au XVIIIe siècle* (Québec: Les Presses de l'Université Laval, 2009), 158; Nicolas Lémery, *Traité universel des drogues simples* (Paris: Laurent d'Houry, 1698), 12, "Ils sont pectoraux, aperitifs, ils excitente le crachat, ils adoucissent les acretez du sang, ils provoquent les mois aux femmes."

[63] Bougard, "La Pratique de Chymie de Sebastien Matte La Faveur," 84.

his name and that of his wife, stipulates the usual 1,000 *livre* fine against any distributor "who does not have the consent of the Sieur and Dame Dionis." In the decades following 1760, this consent appears to have been granted with a surprising frequency. As we shall see in Chapter 3, Dionis was careful to provide written permission to each of his *commissionaires*, and these permission certificates were then registered with the Prévôté de l'Hôtel. The Prévôté registers for the 1740s do not include any Dionis *orviétan* franchisees—although this could simply mean that Dionis had not yet made registering them part of his *modus operandi*—and those for the 1750s have not survived, but by the 1760s Dionis was farming out his privilege to a steadily growing number of vendors each year. In 1763, for instance, eight were licensed; in 1764, there were another ten; in 1765, another twelve. Who were these franchise vendors? Pierre Baron has provided a breakdown of the composition of this group for the period 1762-1783, and found that out of a total of two-hundred and sixteen permissions, forty-five specified that they were surgeons, thirty-six were operators, and thirty-two were dentists, followed by sixteen botanists, and a smattering of other occupations, from chymists to innkeepers.[64]

*3.5. Advertising rights.*

Six of the pre-1728 privileges include provisions that either imply or explicitly indicate that the holder has the right to advertise their remedy on posters and printed broadsheets. The Sieur Aubry, for instance, was permitted by his 1683 privilege "to have posters (*affiches*) placed wherever he should see fit."[65] Trademarks are closely linked to

[64] Pierre Baron, "La vente de l'orviétan en France à la fin du XVIIIe siècle," St. Honoré les Bains, 6-8 June 1997, *Actes de la Société française d'histoire de l'art dentaire*, accessed May 10, 2014, http://www.biusante.parisdescartes.fr/sfhad/vol2/debut.htm; see also Brockliss and Jones, *The Medical World of Early Modern France*, 640–642; and the list of *commissionaires* in Le Paulmier, *L'Orviétan*, Pièce LII, 233–246.

[65] AN $O^1$ 27, fol. 108v-109r, Privilège du Sieur Aubry pour son remède contre les fièvres (May 1, 1683).

advertising in the privileges. Privilege holders were permitted to sell and advertise their medications using the arms of the royal court as their mark; the 1691 privilege of the oculist Louis Jouën for his cancer cure includes provisions not only permitting him to advertise using posters and printed broadsheets (*affiches et placards*) but also to make use of a *tableau* (probably a large sign on wood or canvas) with the royal arms, which he can place above his door "for the facility of the public."[66] As a privileged merchant following the court, Daumont, Matte La Faveur's Parisian vendor of syrups and mineral waters, was likewise permitted to use the royal arms in his advertising, and to use the *fleur de lys* as mark of authenticity on his bottles of mineral waters.[67]

*3.6. Testing*

The 1728-1731 legislation regulating medical privileges would put a strong accent on the empirical testing of the medications in question, but to what extent was testing already going on? Out of the corpus of forty-six pre-1728 exclusive-sales privileges, only thirteen make specific mention of successful trials (*épreuves*), usually supervised directly by the first physician or by other doctors appointed as commissioners on his behalf; and out of these thirteen, a mere four explicitly underline that they were granted following hospital trials on multiple patients. These are the 1677 privileges for the delousing sachets of the Duc de Bouillon,[68] the 1688 and 1703 privileges for Helvétius' *remède spécifique*,[69] and Louis Jouën's 1691 privilege for his remedy against cancer, scirrhus, and malignant ulcers. Jouën, who was an oculist by trade, was granted his privilege based

[66] AN $O^1$ 35, fol. 258v-259r, Privilege pour la guérison des cancers en faveur de Louis Joüen (September 18, 1691).

[67] AN $V^3$ 189, fol. 10r-v, Permission de Daquin pour Sébastien Matte La Faveur et Jean-Baptiste Daumont (August 8, 1678); see also Daumont's printed *affiches* in BnF Res Z-THOISY- 325, fol. 487-489.

[68] AN $O^1$ 21, fol. 202r-203r, Privilege pour des sachetzs contre la vermine, en faveur de Monsieur le Duc de Bouillon (September 17, 1677).

[69] For more details on this trial see below, chapter 4. AN $O^1$ 32, fol. 224r°-225r° (August 24, 1688).

not only on the result of trials (*épreuves*) on several (*plusieurs*) patients at the Paris Hôpital général, but also "after having seen the attestations of other cures he made of said conditions in other towns of the kingdom."[70] Just beyond the pre-1728 period, the 1730 brevet for the "gouttes" of General La Motte was also granted following hospital trials at the Hôtel des Invalides.[71]

*3.7. Price-fixing*

Another condition sometimes specified in the exclusive-sales privileges is price fixing. The 1678 and 1682 privileges granted by Antoine Daquin to Jean-Baptiste Daumont specified that his "veritables syrops de capillaires de Canada et de Montpellier" were to be sold in four different bottle sizes fixed at 15 *sols*, 20 *sols*, 30 *sols* and one *écu*; and Helvétius's privileges for 1688 specified a "modest price" of three *Louis d'or* for his *remède spécifique*. The exclusive-sales privilege and pension for the elixirs of the General La Motte, later granted to his widow, likewise specified set prices and volumes.[72] Once fixed by the privilege, the prices appear to have remained constant over time, even in subsequent renewals. In the case of Helvétius, the price for the elixirs specified in La Motte's initial privilege of January 1, 1730, was still the same twelve years later in the 1742 privileges granted to his widow, Simone Morcet. It should be mentioned, however, that the La Motte exclusive-sales privileges had another important condition: their elixirs could also be produced and distributed at the Hôtel des Invalides

[70] AN $O^1$ 35, fol. 258v-259r, Privilege pour la guérison des cancers en faveur de Louis Joüen (September 18, 1691).

[71] See below, sect. 5.

[72] The privilege specifies 25 *livres* per phial of the yellow elixir and 20 *livres* for a phial of the white elixir, with each containing a minimum of two and a half *gros* of liquid. See AN O1 86, p. 216-220, Lettres patentes portant privilège d'un Élixir sous le nom de Goutes du General de la Mothe à la veuve La Mothe concurremment avec la maison de St. Cyr (May 3, 1742).

and other military hospitals without any payment to La Motte, and, later, to his widow. They were compensated for this inconvenience with a generous 4,000 *livre* pension.

*4. Laboratory privileges and the 1682 poison edict*

Ten privileges for chymical laboratories and furnaces, granted for the express purpose of producing medicines, can be found in the dispatch registers of the Secretary of State for the Royal Household and the Prévôté de l'Hôtel. These laboratory privileges have a history that stands somewhat apart from that of the exclusive-sales privileges, and any account of the laboratory privileges must first begin with a digression into the history of one of the most fascinating scandals of seventeenth-century France: the Affair of the Poisons (1677-1682). The affair opened when Mademoiselle de la Grange and her lover, the abbé Nail, were accused of poisoning her patron, the lawyer Jean Faurye, and of forging a marriage certificate so that she would inherit Faurye's estate. These events—which followed an earlier case of poisoning in 1675, wherein the Marquise de Brinvilliers was accused, along with her lover, of poisoning her father and brothers in order to inherit their estates—precipitated a massive investigation by the chief of the Paris police, Gabriel Nicolas de la Reynie, and the creation of a special tribunal, the Chambre de l'Arsenal, which uncovered a massive underworld of criminal magicians, diviners, and poisoners-for-hire reaching all the way into the inner circle of the king. In the most famous case, the midwife La Voisin (later executed as a sorceress) implicated Louis XIV's own mistress, Madame de Montespan, in the purchase of aphrodisiacs and in the arrangement of a number of black masses officiated by the abbé Etienne Guibourg. Between 1677 and 1682, the investigation led to numerous arrests, tortures, and over three dozen executions, including those of several chymists. The affair surrounding

Madame de Montespan was hushed, the Chambre de l'Arsenal was eventually dissolved, and an edict was finally promulgated in July of 1682 to bring closure to the affair.[73]

This edict provided a new rationale for laboratory licensing, and is cited in almost all of the laboratory privileges. Despite its first-order importance for chymical regulation, recent accounts of the Affair of the Poisons give little attention to the role of medicine and chymistry, focusing instead on the role of black magic. The accounts of Arlette Lebigre and Lynn Mollenauer dedicate only a few pages to the chymical regulations of the 1682 edict.[74] Beyond its opening articles regulating divination, the edict is remarkable as an early instance of legal controls being placed on the circulation of toxic substances, notably arsenic, orpiment, and mercury sublimate, all of which would henceforth be sold only to persons who needed to employ them as part of their professions, notably physicians, apothecaries, and tradesmen such as goldsmiths and dyers. Detailed registers of the names and addresses of all purchasers would need to be kept by the vendors of such chemicals (including spicers and haberdashers), and the purchasers would themselves need to keep registers of the use of the substance, including the quantities held and used for different activities. But for my purposes here, the most important part of the edict is its eleventh article:

> We expressly prohibit all persons of whatever profession or condition—excepting approved physicians, and in the places of their residence, professors of chymistry, and master apothecaries—to have any laboratories for working at any preparations of drugs or distillations, under pretext of producing chymical remedies, experiments, or particular secrets, of searching for the Philosophers' Stone, converting, multiplying, or

[73] See Jean-Christian Petitfils, *L'affaire des Poisons. Crimes et sorcellerie au temps du Roi-Soleil* (Paris: Perrin, 2010); Lynn Wood Mollenauer, *Strange Revelations: Magic, Poison, and Sacrilege in Louis XIV's France* (University Park, Pa.: Pennsylvania State University Press, 2007); Arlette Lebigre, *L'affaire des poisons , 1679-1682* (Bruxelles: Editions Complexe, 1989); Claude Quétel, *L'affaire des poisons: crime, sorcellerie et scandale sous le règne de Louis XIV* (Paris: Tallandier, 2015).

[74] Mollenauer, *Strange Revelations*, 129–130; Lebigre, *L'affaire des poisons , 1679-1682*, 143–145.

> refining metals, or of preparing crystals or colored stones, and for other similar pretexts, without having first obtained permission to have such laboratories from us in the form of letters of the Great Seal and having presented and declared them to our judges and officers of police of each given place.[75]

Following this edict, private chymical laboratories were licensed by the Secretary of State for the Royal Household. It should however be noted that this edict should not be seen as a royal condemnation of chymical medicine more generally. Chymical medicine had a long history of royal patronage, particularly through the laboratories, courses, and chair in chemistry at the Jardin du Roi. Even at the height of the Affair of Poisons, the crown also maintained a chymical laboratory explicitly dedicated to the production of chymical remedies, operated by the Capuchins Nicolas Aignan (aka Père Tranquile) and Henri de Montbazon (aka Père Rousseau), whose case will be discussed in Chapter 2.

Some privileges for laboratories appear to have been granted even before the 1682 edict: those of Cosme Damnien Barré, for instance, as well as Henri de Rochas and Marguerite Charpentier. These privileges emanated from the Cour des monnaies, the court charged with the surveillance of coin-making and the prosecution of counterfeiting and other methods of debasing the currency. Helvétius' exclusive sales privileges were registered with the Cour des monnaies because of their provisions for furnaces and

[75] "Faisons très-expresses defenses à toutes personnes de quelque profession et condition qu'elles soient, excepté aux Medecins approuvez, et dans le lieu de leur residence, aux Professeurs en Chimie, et aux Maistres Apothicaires d'avoir aucuns laboratoires, et d'y travailler à aucunes preparations de drogues ou distillations, sous pretexte de remedes chimiques, experiences, secrets particuliers, recherche de la pierre philosophale, conversion, multiplication ou rafinement des metaux, confection de cristaux ou pierre de couleur, et autres semblables pretextes, sans avoir auparavant obtenu de nous par Lettres du grand Sceau la permission d'avoir lesdites laboratoires, presenté lesdites Lettres et fait declaration en consequence à nos Juges et Officiers de Police des lieux," AN AD XI 21, item 45, *Edit du roy pour la punition de differents crimes qui sont devins, magiciens, sorciers, empoisonneurs. Regle ceux qui peuvent vendre ou employer les drogues dangereuses, et à qui il est permis d'avoir des fourneaux ou laboratoires. Registré en Parlement le 31 aoust 1682.* (Paris: François Muguet, 1682), 5. Professeurs de Chymie is likely a reference to the instructors in chymistry at the Jardin du Roi.

laboratories,[76] as were several pre-1682 furnace privileges granted for iatrochemical purposes; the Cour des monnaies also prosecuted chymists who owned unregistered furnaces.[77] Parisian distillers in particular had been obliged to request permissions to have furnaces from the Cour des monnaies because of their potential use in counterfeiting.[78] As such, the 1682 edict marks not so much a completely new form of regulation as a move from one concern over chymists to another: namely, a shift from fears of counterfeiting to fears of poisoning.[79]

5. *Pensions and the disclosure of medical secrets*

Some purveyors of medical secrets (six within my corpus) were provided with a pension from the royal treasury after disclosing their secrets to the crown. The earliest pension I have found is of 1,200 *livres* for Robert Talbor's valet, Philippe de la Verdure, in exchange for his febrifuge specific in 1680, a case which will be discussed at length in Chapter 2. The latest pre-1728 pension was valued at 1,000 *livres* for the widow of Garus, inventor of the famous elixir bearing his name. Among the corpus of six pre-1728 pension brevets, the average value is 1,500 *livres* per year. All of these pensions mandate the disclosure of the medical secret to the king and his first physician, and some also mandate the publication of the secret for the benefit of the general public.

[76] AN $Z^{1B}$ 95, p. 947-950, Helvétius privilege (August 21, 1688).

[77] See for example AN $Z^{1B}$ 94, Ordonnances et arrêts civils et criminels (1679-1683), fol. 44v-45v, furnace privilege for Cosme Damien Barré (October 8, 1679); fol. 214r, furnace privilege for the Écuyer Seigneur de Hautebont (November 28, 1677). The Cordelier Jacques Tiran was convicted by the Cour in 1681 of having an illicit laboratory in the Marais (including furnaces, a matrass, and various phials) in which he had produced "oils extracted by chymistry." See AN $Z^{1B}$ 94, fol. 423r-v (March 6, 1681).

[78] Robert Scagliola, "Les apothicaires de Paris et les distillateurs" (Thèse de pharmacie, Université de Strasbourg, 1943), 36–42.

[79] My search through the Cour des monnaies fonds was cursory, given time constraints, but revealed several interesting cases. As far as I am aware, series $Z^{1B}$ stands as a hitherto unrecognized source for state regulation of chymists and chymistry in France.

The "gouttes jaunes" and "gouttes blanches" of the General La Motte provide a revealing and amply-documented instance of pension-granting in exchange for the disclosure of a medical secret. Antoine Dumut de la Motte (sometimes La Mothe) had served as a Major-General of Artillery for the Transylvanian Prince Ragortzi.[80] When he returned to France, he brought with him a recipe for a golden elixir. Trials on patients at the Hôtel des Invalides led to a favorable report from Morand and other physicians, and so the king acquired La Motte's secret in exchange for a pension and an exclusive-sales privilege. The only exception to his monopoly were army hospitals and the Hôtel des Invalides, which were permitted to produce the medication for the king's troops. The privilege was later held by La Motte's widow, Simonne Morcet, who renewed it in 1742, 1750 and 1768.[81] La Motte's brevet was granted January 1, 1730—in the midst of the period when the *commission* for the examination of remedies was forming—and the value of his pension was 4,000 *livres*, over double the value of the average pension.[82]

The most interesting sources surrounding La Motte are two letters, a lengthy pair of chymical recipes, and an accompanying *mémoire* on how to administer the medication, bound together in a manuscript compendium at the Bibliothèque nationale. These documents shed light on how the process of "secret disclosure" took place. They show that the task of examining La Motte's secret was given to one of the consulting royal

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[80]Probably Ferenc Rákóczi II (1676-1735), prince of Transylvania, whose rebellion against the Habsburgs was subsidized by Louis XIV during the War of the Austrian Succession. Rákóczi was later received at Versailles during his exile: see Miklós Molnár, *A Concise History of Hungary*, trans. Anna Magyar (Cambridge: Cambridge University Press, 2001), 133–138; in his French memoirs, Rákóczi makes frequent mention of a Colonel La Mothe: see François Rakoczy, *Les memoires du prince François Rakoczy sur la guerre de Hongrie, depuis 1706 jusqu'à la fin*, 5 vols. (The Hague: Jean Neaulme, 1739).

[81] Bouvet, "Les gouttes du général de la Motte," 7–8. This story is similar to that of Ferdinand de Guiller, who also served in an army in Eastern Europe (Dalmatia in his case) and returned with a medical secret which found French military applications (see Chapter 5).

[82] *Mercure de France* (March 1730), 555. The prices are the same as those specified in La Motte's widow's 1742 privilege: 25 *livres* per phial of the yellow elixir; 20 *livres* per phial of white elixir. I have been unable to find a copy of the original brevet granted to La Motte, but the later renewals survive.

physicians, Antoine Sidobre (1672-1747), and that the product of this examination is fifty pages of detailed instructions on how to produce the "gouttes d'or" and the "gouttes blanches," signed by La Motte and Sidobre. The instructions report dozens of chemical operations, undertaken at different locations (including the royal mint and the personal laboratories of La Motte and Sidobre). The "gouttes jaunes" (also known as "gouttes d'or") are revealed to be "une teinture d'or dulcifiée tirée par l'esprit de vin tartarisé et alkoolisé," and are especially extensive, being made up of thirty-five distinct steps. The cheaper and simpler to make "gouttes blanche" are "une dissolution de cinabre minerai, faite dans l'esprit de vin tartarise et alkoolisé," requiring only six steps. [83]

The recipe *mémoire* was put in the hands of no less than the Cardinal de Fleury (1653-1743), tutor and later *de facto* prime minister of Louis XV, who sent it to one of the royal librarians, the abbé Targuy, in the form of a sealed package, with a letter, dated October 4, 1729, including the following instructions for the librarian:

> The intention of the King is that the *mémoire* which contains the method to compose the two elixirs of the General de La Motte should be deposited into his library. I have put it into a packet (here attached) which cannot be opened except by an express order of His Majesty. As regards the *mémoire* which explains the properties of these elixirs, it too should be attached to the sealed packet.[84]

The royal librarian Targuy acknowledged receipt (a draft of his letter is included in the package) and confirmed that the package had been placed under lock and key in the

[83] BnF ms. NAF 22162, "Mélanges de médecine et de pharmacie XVI$^{e}$-XIX$^{e}$ siècle," fol. 36-67, "Quatre pièces relative à l'élixir du General la Motte du mois d'octobre 1729 (deux lettres et deux mémoires)."These documents were first noticed by Maurice Bouvet, "Les gouttes du général," *Revue d'histoire de la pharmacie* 37, no. 124 (1949): 487–89. I plan to return to this source in a subsequent publication.

[84] "L'intention du Roy est que le mémoire qui contient la manière de composer les deux Elixirs du General de la Mothe soit mis dans sa bibliothèque en forme de Dépôt. Je l'ai fait mettre dans le pacquet cy joint lequel ne pourra être ouvert sans un ordre exprès de Sa Majesté. À l'égard de celuy qui explique les propriétés de ces Elixirs, il doit être joint au paquet cacheté," BN ms. NAF 22162, 37r°-v°.

library.[85] Although La Motte's secret was apparently kept, one possible result of royal purchase in other cases was the secret's subsequent publication: as we shall see in Chapter 2, the preparation of Robert Talbor's *remède anglois* was published after Talbor's death by Nicolas de Blégny in collaboration with Antoine Daquin, the royal first physician.

*6. Privileges re-examined: The creation of the Commission (1728-1731)*

The *ad hoc* granting of lifetime privileges and pensions did not continue indefinitely, as the July 3, 1728 *arrêt* which opened this chapter makes clear. While the previous sections explored the privilege regime which it sought to reform, in this final section I will explore how privileges were granted *after* the reforms of 1728-1731, and ask what, if anything, changed in the following decades.

Over a month after the deadline for submitting privileges for re-examination had passed, Dodart, the architect of the 1728 reforms, pressed the king to grant an extension. The rationale was "to leave no pretext for those who have not yet satisfied the conditions," a goal that was reached by providing yet another month from the day the new *arrêt* was published (November 4, 1728 according to the printed version).[86] Beyond extending the deadline in order to gain a better show of compliance from the privilege holders, the new *arrêt* also specified for the first time that the paperwork and medications

[85] Ibid., 38r°-v°.

[86] *Arrest du Conseil d'Estat du Roy, qui defend à toutes sortes de personnes de distirbuer des Remedes sans en avoir obtenu de nouvelles Permissions. Extrait des registres du Conseil d'Estat du Roy. Du 25 octobre 1728.* (sl: sn, sd). My working copy is BnF F- 21108 (49). Cf. AN E 2089, Minutes d'arrêts, Secrétaire d'État de la Maison du Roi, fol. 250r°–252r° (25 octobre 1728).

All of the time limits specified in these *arrêts* begin the day they are published, both in print through the circulation of printed copies and broadsides, as well as orally by being called aloud in public places at the sound of trumpets and bells by official criers (*Jurés-Crieurs du Roi*). Because the July 3 *arrêt* was published on the 24 July, this means in fact that the original deadline fell on the 24 September; another month passed before the new *arrêt* was promulgated on 25 October, and several weeks again passed before it was published on 4 November, meaning the new deadline would fall on 4 December. As such, with these various elapses in time and delays, medical privilege holders had five months to provide their paper work and samples of the remedies to the police.

would be examined by an eleven-person *commission* of physicians, surgeons, and apothecaries, with Dodart at its head. Together, this set of physicians, surgeons, and apothecaries were among the most famous in France: prestigious court practitioners, chymists from the Jardin du Roi, members of the Académie royale des sciences, with both Paris and Montpellier graduates among their number.[87] The new *arrêt* was also careful to specify the distinct roles of each type of practitioner, observing that the principal task of examination was left to the physicians and apothecaries; surgeons would be involved only in cases where the remedy was surgical in nature.

Precious little has survived documenting the work of the 1728 commission, which makes it difficult to assess how the commission did its work. We can assume that many vendors obeyed the 1728 *arrêts*. As the deadlines kept being extended, a growing collection of drugs and their accompanying privileges must have been deposited with the Lieutenant General of Police. At some point, the commissionaires must have convened to analyze them. But what was their *modus operandi*? The only document that I have been able to find that offers any trace of the internal workings of the commission is a short,

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[87] The other distinguished members were: Jean-Adrien Helvétius, the son of Adrien and recently first physician to the queen, Marie Leczinska; Étienne François Geoffroy (1672-1731), chymist at the Jardin du Roi and then dean of the Paris Faculty; two royal consulting physicians, Jean-Baptiste Silva (1682-1642) and Michel Louis Vernage (1697-1773); Georges Mareschal (1758-1736), the king's first surgeon; three other royal surgeons, Malval, Petit, and François Gigot de Lapeyronie (1678-1747), later Mareschal's successor; and two apothecaries, Claude-Joseph Geoffroy (1685-1752) and Gilles-François Boulduc (1685-1731), both members of the Académie royale des sciences.

On Vernage, see Isabelle Coquillard, "Vernage, Michel Louis (1697-1773)," *Le Monde médical à la cour de France. Base de données biographique publiée en ligne sur Cour de France.fr*, accessed May 13, 2014, http://cour-de-france.fr/squelettes-dist/bases/medecine/dictionnaire_fiche.php?numero=55.

On Lapeyronie, see Louis-Paul Fischer, Jean-Jacques Ferrandis, and Jean-Éric Blatteau, "François de Lapeyronie, de Montpellier (1678-1747), restaurateur de la chirurgie et esprit universel : l'âme, le musc, les oeufs de coq," *Histoire des sciences médicales* 43, no. 3 (2009): 241–48.

On Geofroy and Boulduc, see Gustave Planchon, *Dynasties d'apothicaires Parisiens : I. Les Geoffroy* (Paris: Masson et Cie, ed., 1899); Gustave Planchon, *Dynasties d'apothicaires parisiens : II-III. Les Boulduc. Les Pia.* (Paris: Octave Doin, 1900); Paul Dorveaux, "Apothicaires membres de l'Académie royale des Sciences VII : Claude-Joseph Geoffroy," *Revue d'histoire de la pharmacie* 20, no. 79 (1932): 113–26; Christian Warolin, "La dynastie des Boulduc, apothicaires à Paris aux XVIIe et XVIIIe siècles," *Revue d'histoire de la pharmacie* 89, no. 331 (2001): 333–54.

one-page *mémoire*, dated October 16, 1729, and signed by René Hérault (1691-1740), Lieutenant General of Police. It distinguishes three types of remedy: those which are dangerous, those which are salutary, and, finally, the pragmatic category of "indifferent remedies." In the latter case, the *mémoire* observes that the commission should not abolish those privileges which it has pleased the king to grant for "indifferent" remedies which cause no ill effects. Their vendors were permitted to continue holding privileges allowing them to sell such "indifferent" remedies, although—a subsequent note clarifies—they should no longer hold the exclusive rights to do so: "In this case the exclusion must be abolished, and the apothecaries must be given the liberty to compound these remedies."[88] Any monopoly clause should be removed so that the apothecaries will likewise be permitted to sell the supposed "medication." This clause offers the nearest thing to an admission of the potential political consequences involved in re-assessing and potentially revoking privileges that were likely granted through the intercession of powerful patrons at court, including the king himself.

The remainder of the *mémoire* expresses the two principal objectives:

> The commission has two important goals which are of the utmost importance:
> 1. In the future, to no longer grant privileges for remedies under any pretext whatsoever unless they have been analyzed beforehand, and that it be evident that the remedy is distinctive, not present in any Pharmacopeia, and that it is salutary.
> 2. To express the illnesses and circumstances of illnesses where it is suitable to make use of the remedies which have been approved or will be later. This article is among the most essential and just as worthy as any other of the full attention of Messrs the Commissioners.[89]

[88] BIUS Médecine, Ms 2006, fol. 310r-v.

[89] "La Commission a deux grands objets ausquels il est necessaire de s'attacher par preference à tout : 1. De ne plus accorder a l'avenir sous quelque pretexte que ce soit aucuns Privileges pour des remedes que l'analyse n'en ait esté préalablement faite, et qu'il ne soit évident que le remede proposé est particulier, qu'il n'est dans aucun Pharmacopée et qu'il est salutaire. 2. D'exprimer les maladies et les circonstances des maladies ou il conviendra a faire usage des remedes qui sont approuvées ou qui le seront par la suite. Cet article est des plus essentiels et est aussi digne qu'aucun autre de toute l'attention de messieurs les Commissaires," BIUS Médecine, Ms 2006, fol. 310.

In contrast with the rather opaque statements of the *arrêts* that privileges would be "re-examined," these protocols offer a window into what likely took place in the deliberations of the commission: the testing of drugs with the objective of determining if they in fact responded to given conditions; the assessment of whether or not a given drug was already known in the pharmacopeiae; and, finally, the careful specification of the circumstances and conditions of sickness in which the drug should be used. These considerations, far more sophisticated than the "approved" vs. "unapproved" or "salubrious" vs. "insalubrious" reasoning implied by the text of the 1728 *arrêts*, would be further elaborated in the final March 17, 1731 *arrêt* that brought the developmental phase of the commission to a close and created a clear protocol for the "new regime" of privilege-granting.

It is of course possible that these apparently new requirements may simply have codified the existing practices of the first physicians. Take, for example, the following anecdote from Bernard Le Bouyer de Fontenelle's *éloge* of Fagon, the first physician who preceded the reformer Dodart during the height of the pre-1728 privilege regime. According to Fontenelle, Fagon was "no friend to empirics," although he was interested in medical secrets, and had bought several on behalf of the king:

> He wanted these to be true secrets, that is to say, unknown up until that point, and consistently useful. He often showed people who believed they possessed a treasure that it had already been made public: he would show them the book in which it was enclosed—for he read widely—or a *mémoire* that had already turned it to good account.[90]

[90] "Il vouloit qu'il fussent veritablement Secrets, c'est-à dire inconnus jusques-là, et d'une utilité constante. Souvent il a fait voir à des gens qui croyoient posseder un tresor, que leur tresor étoit déjà public, il leur montroit le Livre où il étoit renfermé, car il avoit une vaste lecture, et une mémoire qui la mettoit tout entiere à profit," Fontenelle, "Eloge de Fagon" *Histoire de l'Académie royale des sciences* (1718), 99.

These comments suggest that Fagon was careful to establish the novelty of a cure before recommending a pension or a privilege, lest vendors be rewarded for "secrets" that are already in the "public domain" (that is, printed in an existing pharmacopoeia). It seems likely that the other steps recommended in the *mémoire*, including establishing whether or not the drug affected the condition for which it had been proposed, was implicit within the trials of the medication.

Leaving aside the question of whether or not the new protocols merely reflect a codification of existing practices, the "new privilege regime" was not yet instantiated at Dodart's death on November 25, 1730. To this was added the death of one of the commission's most prominent members, Geoffroy, on January 6, 1731. These ill-timed deaths may have stalled the reform project, but the new first physician, Pierre Chirac, a graduate of the University of Montpellier, took up the banner and replaced Geoffroy with Hyacinthe-Théodore Baron (1707-1787), the new dean of the Paris Faculty.[91] This was followed a week later by the March 17, 1731 *arrêt*, which would be the final word on privileges for proprietary medicine in France until 1754, when the commission would be renewed, and stands as the most articulate project for regulation until the creation of the Société royale de médecine in 1776.

The clear intention of the March 17, 1731 *arrêt* is to put a definitive end to the "wild-west" period of privilege-granting and replace it with a more regular model. With this goal in mind, it provides nine articles that would henceforth govern the regulation of privilege granting. The first specifies that brevets and privileges will no longer be granted on the authority of the first physician alone; all must be signed and examined by the

[91] AN E 2111, fol. 215r°-v° (March 11, 1730). No printed version of this *arrêt* appears to have survived, likely due to the fact that its contents are largely superseded shortly thereafter by the March 17, 1731 arrêt.

whole commission. The second adds that all brevets and privileges will now have a three-year expiry date, after which holders must apply for renewal, which will only be granted based on certificates of approval from physicians and surgeons of those places where the remedies were used. The *arrêt* is clear on these points: even if three years is not explicitly specified in the text of the brevet or letters patent, this is the term limit on all existing or future brevets, and violators will face a thousand *livre* fine (payable to the local hospital). Finally, it prohibited all remedies sold under old brevets which had not been re-examined by the commission, both those from before 1728 as well as any that failed to secure renewal after their three-year term had expired. To these ends, the third article mandated careful record-keeping: minutes of the brevets and privileges—presumably a register of examinations and approved remedies—were to be kept by the first physician. Any affiches or other advertisements for approved remedies must conform only to those remedies that were examined and approved by the *commission*, under penalty of a 500 *livre* fine for false advertising. Finally, all privileges will be circulated to faculty and college deans in a printed copy, and the deans will be encouraged to report any problems or accidents involving privileged medications.

Well beyond regulating secret remedies, Chirac also aimed to use the commission to lay the groundwork for a broader regulatory system—a proto-*Société royale*—even if it lacked judicial power to enforce its will and was confined to "encouraging" cooperation from the medical faculties and corporations in Paris and the provinces. The final articles enjoined provincial faculties and other medical corporations to collaborate with the commission, notably requesting that they report any "unprivileged" vendors; and

specifying that inter-corporate medical conflicts should be reported to the commission.[92] The final article of the 1731 *arrêt* returns to the question of secret remedies and endeavors to anticipate any jurisdictional conflicts: it enjoins all civil officials in the towns and provinces not to give permissions to any vendors, charlatans, or operators except those approved by the commission.

A clear path of development can be discerned through these *arrêts* from 1728-1731. The first *arrêt* (July 3, 1728) simply represents the recognition of a problem (too many privileges have been granted, and some may be dangerous) and the beginnings of a solution (recalling all brevets and letters patent, having them deposited along with samples of their associated drugs in the hands of the Lieutenant-General of Police). The second *arrêt* (October 25, 1728) nominates a commission of eleven experts to examine the drugs and their privileges. A *mémoire* dated October 29, 1729, which identifies different kinds of examination outcomes and specifies that the originality of the drug must be assessed (*qu'il n'est dans aucun Pharmacopée*), likewise that the disease or condition which it responds to must be specified, as must the circumstances on which it should be used. These developments culminate with the March 17, 1731 *arrêt*, which details the new way in which substances will be examined and privileges will be allotted.

But did these careful prescriptions coalesce as a functional regulatory regime? The reforms initiated by Dodart and continued under Chirac appear to have ended in disappointment. A draft copy of an undated "Rapport et requeste" by Chirac and his commissioners opens by admitting that, following the March 17, 1731 *arrêt*,

> Only a small number of individuals appeared with their brevets in hand, most not having wanted to submit their remedies and their conduct to a

[92] This role extends only to providing expert advice on the jurisdiction of the three corps; despite its ambitions, the *commission* did not have any real executive role in resolving disputes.

> new examination, abusing their surreptitious privileges in Paris as well as in the provinces, to the prejudice of Your Majesty's subjects, notwithstanding the prohibitions made by the *arrêts* of Your Council.[93]

This failure, coupled with a second motive, namely the "mutual usurpations" of the three medical corps—physicians, surgeons, and apothecaries—provide the commissioners with the rationale for the request. The noncompliance of the secret remedy vendors and "mutual usurpations" in the three corps are all seen by Chirac as related phenomena. The disintegration of the proper division of medical labor is in fact enabled by the undue "license" of the secret remedies vendors and the "colporteurs, chymists, spicers and drugists, who furnish them with the means." To this end, he proposed twenty-four new articles for a new *arrêt*. The first five articles include particularly draconian measures against noncompliant secret remedies vendors. Any vendors who continue to sell remedies under privileges that were submitted for re-examination but were not re-authorized following the new *arrêts* should face the penalty of imprisonment as "poisoners of the public" and should be condemned to serve in the galleys. Any brevets that were not re-submitted within the three-month deadline of the March 17, 1731 *arrêt* will be declared null and void, and if their holders continue to sell remedies they will face the above penalty, as would any individual treating human patients or even livestock without a proper brevet. Chirac also specifies that any vendors holding brevets that were re-authorized by the commission should face the same penalty if they were selling any remedies other than those authorized by their brevet or using them in cases or conditions other than those specified by the brevet. Finally, local officers should carefully and

[93] "Il ne se seroit presenté qu'un petit nombre de particuliers pourvûs desdits Brevets, la plus grande partie n'ayant voulu soumettre et leurs remedes et leur conduite à un nouvel examen, abusant de ces privileges subreptices tant a Paris que dans les provinces, au prejudice de vos sujets, nonobstant les deffenses portées par les arrests de votre Conseil," BIUS Ms 2006, 329r-v.

diligently report the results of their inquiries to the local Parlement so that cases against the illicit vendors can be prosecuted.[94]

The fact of continued noncompliance with the earlier *arrêts*, coupled with the draconian punishments recommended against the carefully defined offenses of violators and the attempt to "restore" the "proper" division of labor among the legitimate medical corporations, all converge to give Chirac's "Rapport et requeste" an overall tone of frustration. The twenty-four articles the report recommends never made their way into law, and Chirac himself died within a year of writing it. Over the following decades the commission continued to meet sporadically, examining remedies and recommending new brevets, but the extent to which the 1728 and 1731 *arrêts* were enforced remains unclear. Prosecution may have been contingent upon the desire of a vendor's adversaries to report their infractions: the Contugi orviétan boutique was searched and sealed in 1729 after local apothecaries reported Contugi to the Lieutenant General of Police for failing to deliver his brevet to be re-examined under the new privilege regime.[95] Other examples of noncompliance can be found in prominent vendors who sold proprietary drugs for decades but appear never to have secured privileges. Some vendors saw obvious advantages to securing privileges, particularly if they hoped to sell their remedies to the state or other bulk purchasers, but others seem not to have bothered, a fact which suggests the *arrêts* were not consistently enforced in Paris or the provinces.[96]

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[94] Ibid., 331r-332v.

[95] See below, ch. 3, sect. 5; and Gustave Planchon, "Notes sur l'histoire de l'Orviétan," *Journal de Pharmacie et de Chimie* 26, no. 3–7 (1892): 293–298; Le Paulmier, *L'Orviétan*, 86–88.

[96] Several high-profile vendors appear to have never requested monopoly privileges. Take for example the *remède universel*, a proprietary purgative sold by Jean-Louis Ailhaud (1674-1766), which was never protected by a privilege; and the former *pilules mercurielles* of the army surgeon Augustin Belloste (1654-1730). Belloste sold his famous mercurial pills from 1681 onward but appears to have never requested a monopoly privilege. The earliest privilege for them appears to have been granted well into the career of his son, Michel-Antoine Belloste, in 1756. The Belloste pills stand as a particularly prominent

Lacking a bureaucratic archive or surviving papers from the first physicians, it is impossible to assess the degree to which the new commission-based processes were implemented. But looking specifically at vendors who actually requested privileges, can we say that, following the intentions of Dodart, the "embarrassing authority" of examining drugs was now shared with the commission? Evidence suggests that it was not. When Pierre Brodin de Lajutais and Etienne Guerin petitioned to renew the privilege for the *poudre fébrifuge* in 1733, it was the patronage of Chirac's successor, François Chicoyneau (1672-1752), that was the deciding factor, and they managed to secure the renewal in spite of the vociferous opposition of the commission.[97] Guerin likewise reports that the cost of a monopoly brevet in this period was around 1,200 *livres*—admittedly without specifying exactly to whom the sum needed to be paid—and personally worked very hard to ingratiate himself with the first physician through gifts of tobacco.[98] The members of the commission sat whenever it was convoked, but it remained under the aegis of the first physician and its authority could be overridden by him or the Secretary of State for the Royal Household. It seems that the personal judgment of a man who had literally been entrusted with the health of the monarch was quite sufficient to decide whether or not a drug "worked," whether it was useful to the interests of the fiscal-military state, and whether it should be rewarded with a privilege.

Other anecdotes likewise suggest that at least some contemporaries continued to perceive the first physician's prerogative of privilege-granting as inherently corrupt all

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example of a proprietary drug that was never protected by a pre-1728 and which also appears to have passed under the radar of the latter privilege regime. See AN V5 1269 fol. 173. Pascal Clair and Jean-Marie Le Minor, "Augustin Belloste (1654-1730), de la chirurgie militaire à la thérapeutique mercurielle," *Revue d'histoire de la pharmacie* 89, no. 331 (2001): 369–80; Maurice Bouvet, "Le « Remède Universel » Ou « Poudre d'Ailhaud," *Courrier Médical*, no. 30 October-18 December (1927): 495–96, 511, 523, 535–36, 551, 567, 579, 591.

[97] See below, ch. 5, sect. 3.

[98] AN $V^7$ 246, (6), dossier 1, piece 10, Guerin to Lajutais (December 30, 1732).

the way up to the creation of the Société royale. Take for example the comments of Frédéric-Melchior Grimm on Jean-Baptiste Sénac (1693–1770), the successor to Chicoyneau as first physician. In his manuscript newsletter, the *Correspondance littéraire*, Grimm provides what amounts to a posthumous character assassination (the very opposite of an *éloge*), which ends with a description of his gross venality in privilege-granting. Grimm observes that Sénac did not really "believe" in medicine, but recognized that physicians were the longest-standing "merchants of hope" (*marchands d'espérance*) and so resolved to become one. Grimm adds that Sénac never made eye-contact while speaking—implying he was dishonest—and that, as a dyed-in-the-wool Montpellier doctor, he supported the introduction of inoculation in France simply to give grief to the Paris Faculty. According to Grimm, writing in 1771, Sénac had delegated his responsibilities in privilege-granting to his wife:

> She directed the Charlatans Department, and enjoyed the attendant profits, and in her extreme avarice she wanted to push these profits as far as they could go. Every rascal who paid handsomely was sure to get a permit from the first physician, delivered by his wife, to sell drugs that were often dreadful for the health of the people throughout the kingdom: his reign was that of the charlatans. His death opened an important position which was close to the royal person, and which circumstances could render infinitely interesting. Moreover, the position is lucrative, having consistently provided Madame Senac with over one hundred thousand *livres* in revenue annually.[99]

The reader may evaluate these comments in due measure with Grimm's other jabs against Sénac. What is clear from them is that the practice of privilege-granting continued to

[99] "Elle avait le département des charlatans, et y jouissait des profits attachés, que son extrême avarice voulait pousser aussi loin qu'ils pouvaient aller. Tout coquin qui payait grassement était sûr d'avoir une permission du premier médecin, délivrée par sa femme, pour vendre et débiter par tout le royaume des drogues souvent funestes à la santé du peuple : son règne fut celui des charlatans. Sa mort fait vaquer une place importante qui approche de la personne du souverain, et que les circonstances peuvent rendre infiniment intéressante. Elle est d'ailleurs très lucrative, et il passe pour assez constant qu'elle a valu tous les ans plus de cent mille livres de rente à madame Senac," Friedrich Melchior Grimm and Denis Diderot, *Correspondance littéraire, philosophique et critique de Grimm et de Diderot, depuis 1753 jusqu'en 1790.*, ed. Jules-Antoine Taschereau and A. Chaudé, vol. 7 (Paris: Furne, 1829), 168. (January 1771).

carry the stigma of charlatanism in spite of the efforts of Dodart and Chirac to reform its "abuses." Grimm's image of a corrupt first physician whose wife managed the sale of brevets in a "department des charlatans" reminds us of the potential for venality and patronage inherent in the practice of medical privilege-granting. These innuendos and whispers evoke a medical corner of the world of "court capitalism" at Versailles that has left little record for historians to analyze, as do Verdier's comments on the "infinite number of permissions" which the first physicians were constantly compelled to grant to "empirics" supported by powerful courtly patrons whom they could not dare refuse. This situation likely continued even under the Société royale in the final decades of the Ancien Régime. Although some historians have taken spokesmen of the Société such as Vicq d'Azyr at their word and described it as a model of enlightened medical regulation, Colin Jones has astutely suggested that the remedy-licensing practices of the Société continued to provide a "powerful lever of potential patronage and self-enrichment."[100]

My contention in the chapters that follow is that a small but important coterie of these "medical entrepreneurs" were much more than mere symptoms of Ancien Régime corruption or evidence of a pluralistic medical marketplace rapidly supplanting traditional corporatism. Rather, they were aware of current theoretical conversations in learned medicine—most notably surrounding the virtues and therapeutic effects of medicinal specifics—and in practical terms they worked assiduously to produce innovative new preparations, which often formed the basis for their fortunes. These engagements allowed them to fill a wholly new and potentially lucrative niche in the constrained Ancien Régime medical marketplace by serving the needs of a new class of state and "corporate"

[100] Colin Jones, "The Médecins du Roi at the End of the Ancien Régime and in the French Revolution," in *Medicine at the Courts of Europe, 1500-1837*, ed. Vivian Nutton (London: Routledge, 1990), 235.

consumers that sought effective, generalizable remedies which could be used on entire populations in military, commercial, and missionary contexts.

# Chapter 2

## Chymical pathology and therapy at the court of Louis XIV: The Louvre Capuchins and Robert Talbor's *remède anglois*

Chapter 1 focused on privilege, what might be called the legal basis for secret remedies. This chapter will examine the intellectual basis of such remedies by assessing the role of chymical medicine in explaining diseases and their cures in the period 1680-1700. I argue that Louis XIV patronized the production of chymical remedies and that chymical ideas furnished his royal first physicians with a criterion for explaining the action of drugs that were deemed medicinal specifics. Previous discussions of the fortunes of chymical medicine in seventeenth-century France have focused on the reception of Paracelsianism and the vicious debates over the safety of antimonial medicines—the century-long "Querelle de l'antimoine," 1566-1666.[1] In this chapter, I show that later seventeenth-century chymical medicine also provided powerful models for understanding pathological entities (disease *semina* and *fermenta*; *semences* and *levains*), pathological processes (fermentation), and the therapeutic effects of exotic plant substances like cinchona bark that otherwise eluded the traditional Galenic qualities.

This chapter is organized around the contemporaneous arrival of a group of medical outsiders at the court of Louis XIV in the years 1678-1681: first, the Capuchins of the Louvre (part 2) and second, Robert Talbor, aka "le médecin Anglois" (part 3).

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[1] Laurence Brockliss and Colin Jones, *The Medical World of Early Modern France* (Oxford: Clarendon Press, 1997), 119–138; Didier Kahn, *Alchimie et Paracelsisme en France à la fin de la Renaissance (1567-1625)* (Geneva: Droz, 2007), chap. 4.1, 353–409; Didier Kahn, "Paracelse, l'antimoine et le vin émétique" (unpublished conference paper, Les savoirs du vin à la Renaissance 1450-1650, Pessac, 2013); Elisabeth Labrousse and Alfred Soman, "La querelle de l'antimoine : Guy Patin sur la sellette," *Histoire, économie et société*, 1986, 31–45; Allen G. Debus, *The French Paracelsians: The Chemical Challenge to Medical and Scientific Tradition in Early Modern France* (Cambridge: Cambridge University Press, 1991), 46–99.

Although neither the Capuchins nor Talbor received a monopoly privilege, they were supported by Louis XIV in other ways and can be seen as precursors of the later medical privilege regime. In the first case, the Louvre Capuchins neatly exemplify the extent of support the crown was willing to accord to iatrochemistry, manifested most dramatically in the provisions made for their pharmaceutical laboratory. In the second case, the stunning success and royal endorsement of Robert Talbor's cinchona-based *remède anglois* provoked intense experimental competition by rival practitioners who sought to reverse-engineer its preparation, and it came to serve as a model for subsequent proprietary remedies. The *remède anglois* provided a fertile model in other areas as well, notably in the chymical accounts of its therapeutic action provided by Nicolas de Blégny (1653-1722) and Antoine Daquin (1629-1696). Blégny was one of the royal physicians in ordinary, and held a privilege to publish a vernacular medical journal, the *Nouvelles découvertes*; Daquin was Louis XIV's first physician from 1672 to 1693. The chymical accounts of cinchona which they authored, coupled with the Helmontian and "chymical Hippocratic" ideas of the Louvre Capuchins and Talbor, all demonstrate an openness to chymical medicine—particularly in the form of the so-called "acid-alkali theory" of pathology—at the highest levels of French society.

Chymical medicine provided new techniques for preparing drugs, new criteria for assessing their therapeutic efficacy, and new models of their internal therapeutic action. In the fourth part of this chapter I will show that the chymical account of cinchona's action was also accepted by Guy-Crescent Fagon (1638-1718), Daquin's successor as first physician. The fact that both first physicians endorsed a chymical account of cinchona bark—which came to be a kind of "model specific"—is of special importance

considering the fact that they were the principal medical arbiters of the secret remedies privilege regime at the height of its activity. In a fifth and final section, I consider the extent to which this peculiarly chymical account of medicinal specifics is related to the "ontological conception of disease" that Walter Pagel associated with the influential chymical physician Joan Baptista Van Helmont (1580-1644).

*1. What is a specific remedy?*

Before moving into the question of chymical medicine at court and chymical views of "specifics" like cinchona bark, it is useful to ask just what the term "specific remedy" (*remède spécifique*) meant at the end of the seventeenth century. The 1694 dictionary of the Académie française defines "spécifique" broadly as "Specially appropriate to something," and offers the following medical use of its substantive, "Theriac is a good specific against poison." A second medical example, added to later editions, immediately points to the ways in which the category would expand in this period: "Cinchona is a great specific against intermittent fevers."[2] A more technical medical definition can be found in the 1682 edition of Castelli's *Lexicon medicum*: specifics (*specifica*) are "drugs and their virtues which depend primarily on their whole substance (*tota substantia*) and intrinsic essential form."[3]

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[2] "Propre spécialement à quelque chose" with examples "La theriaque est un bon specifique contre le poison" (1694); and "Le quinquina est un grand spécifique contre la fièvre intermittente" (1762). See *Le dictionnaire de l'Académie françoise*, 1st ed. (Paris: la veuve de Jean Baptiste Coignard, 1694), 395; *Dictionnaire de l'Académie françoise.*, 4th ed. (Paris: veuve de Bernard Brunet, 1762), 758.

[3] "Specificus non solum dicitur de medicamentis, et eorum virtutibus, a tota substantia et forma intrinseca essentiali, primariò dependentibus; atque idem est, quod [gk *Idiosyncrasia*] Vide *ldiosyncrasia*: Item *Occultus.* Hinc Ruland et Iohnson ita descripserunt, quod Specificum formale sit, quod speciem per formales proprietates saltem refert; Et licet materiales quoque virtutes concurrant, formales tamen excellunt, et illae potissimum elaborando respiciuntur; Tales sunt *Tinctura*, et *Oleum*: Verum etiam Paracels. non veritus est extendere ad aegritudines, eas apellando *Specificas*, que sperma suum peculiare habent in corpore, Paramir. l. 2. c. 7 De *Specificis* vero medicamentis lege eundem Achidox. l. 7 Imo et Medicorum sectam quadam constituit, quos vocavit Specificas, qui alias *Experimentales*, et *Empirici* vocantur, in Paramiro de 5. entib. morbor. prolog. 3," Bartolomeo Castelli and Jakob Pancraz Bruno,

The embryo of Castelli's definition can be traced back to the first book of Avicenna's *Canon*. Following Galen's *De simplicium medicamentorum*, Avicenna observes that ingested substances can change the body in three ways: either (1) through their manifest qualities (i.e. those discernible by the senses, e.g. hotness, coldness, wetness, dryness), which affect the body without being absorbed into it through digestion; (2) through their matter after it is assimilated into the body via digestion, as with food; or (3) through their whole substance (*tota substantia*). The "whole substance" did not act therapeutically through its manifest qualities, but rather through an unseen (occult) virtue, which could be recognized only empirically from its effects, rather than identified through the causal reasoning based on manifest qualities.[4] The virtues of medicines which act *per totam substantiam* in this way can thus be learned only through experience.[5]

The concept of action by the "whole substance" was most commonly associated with compound medicines, which were supposed to be able to acquire a wholly new "specific form" (*forma specifica*) through a process of "fermentation" of their various ingredients. This new form could not be predicted through an assessment of the manifest qualities of the individual constituent substances. Michael McVaugh has argued that although Galen acknowledged that some drugs work *per totam substantiam*, "he would certainly have felt this sort of activity to be definitely subordinate to the regular and predictable effects of drugs, whereas for Avicenna just the opposite was true. From the

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*Castellus renovatus; hoc est, Lexicon medicum,* (Nuremberg: Johannis Danielis Tauberi, 1682), 1069–1070. See below, sect. 3.3 on the latter half of this entry, drawn from Ruland's *Lexicon Alchemiae*.

[4] The best description of these concepts is Michael McVaugh, "The Development of Medieval Pharmaceutical Theory," in *Arnaldi de Villanova Opera Medica Omnia. II. Aphorismi de Gradibus* (Granada: Seminarium Historiae Medicae Granatensis, 1975), esp. 17–19. McVaugh cites the 1507 Venetian edition of the *Liber Canonis Avicenne*, fols. 33v-34v. Cf. Galen, *De simplicium medicamentorum temperamentis ac facultatibus*, in Kühn ed. *Opera omnia*, vol. xi (Hildesheim: G. Olms, 1965), 705.

[5] McVaugh, "The Development of Medieval Pharmaceutical Theory," 19.

thirteenth century on it was surely Avicenna who symbolized the unpredictable element in pharmacology and Galen who symbolized its regularity."[6]

Avicenna pointed to the magnet and the torpedo fish as examples of occult causation, but in pharmacy the example par-excellence was theriac. This complex antidote originated in classical antiquity and was attributed to Andromachus, physician to the Emperor Nero. Frederick Gibbs has argued that in late medieval pharmacology, poisons (*venena*) came to acquire a distinct ontological status that cast them as fundamentally harmful to the human body. This contrasts with the classical notion of *pharmaka*, which placed remedy and poison on a spectrum and saw poisoning as a subjective change which depended relationally on the nature of the "poison" and the "poisoned" body. In the new medieval view, a poison came to have its own *forma specifica*, as did its antidote.[7] No longer situated on a continuum, poison and antidote became diametric opposites at the ontological level.

This formal complementarity of specific disease with specific remedy—already latent in Avicenna and developed in a localized way around poison antidotes by late medieval toxicology—would later expand beyond theriac to include other diseases and their "specifics." In the seventeenth century theriac and other poison antidotes (sometimes called *alexipharmaca*) would continue to serve as models for medicinal specifics: the entry for "spécifique" in the 1689 second edition of the *Dictionaire pharmaceutique* cross-references directly to *alexipharmaca*, and cites theriac first and

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[6] Ibid., 19n11.

[7] Frederick W. Gibbs, "Specific Form and Poisonous Properties: Understanding Poison in the Fifteenth Century," *Preternature: Critical and Historical Studies on the Preternatural* 2, no. 1 (2013): 19–46; see also ch. 2 of Frederick W. Gibbs, "Medical Understandings of Poison circa 1250-1600" (Dissertation, Wisconsin-Madison, 2009). "Poison and theriac formed a conceptually complementary pair" (71)

foremost among the "specific" *alexipharmaca*.[8] By this time, the category of diseases which could be treated by specifics had expanded beyond the traditional poisons (*venins*), to include other diseases as well, as exemplified in the *Dictionaire*'s inclusion of intermittent fevers among the ailments the could be cured by *alexipharmaca*.

The *forma specifica* and *tota substantia* tradition were attractive to physicians that encountered diseases and cures which defied explanation through Galenic temperament and manifest qualities. Notable in this regard is the renowned Paris physician Jean Fernel (1497-1558) who contributed to this extension of the theriac-poison model to other diseases. Fernel saw poisonous, contagious, and pestilential diseases as *diseases* of the total substance; consequently, he argued that they required *remedies* of the total substance. Linda Deer Richardson has found that few faculty physicians took up Fernel's position: the Galenic emphasis on temperament and manifest qualities was firmly integrated into the broader existing Aristotelian natural philosophic consensus. Fernel's emphasis on occult causes of diseases pointed to occult remedies, identifiable only through trial and error rather than causal reasoning—a practice too close to that of the empirics.[9]

Although these ideas failed to catch on among the learned establishment in the sixteenth century, they found more traction among Paracelsian and Helmontian chymists in the seventeenth. The Fernelian critique and the Avicennan category of "specifics" were

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[8] "Ces mots *Alexipharmaques* et *Alexiteres* sont tirez du Grec. Les François s'en servent aussi bien que les Latins pour signifier des médicaments qui ont une vertu très particulière de résister aux venins dont les uns sont internes et les autres externes. Les internes remédient proprement à la peste aux fièvres malignes et aux poisons pris au dedans et les externes à la morsure et à la piqueure des bêtes vénéneuses." See De Meuve, *Dictionaire pharmaceutique ou apparat de medecine, pharmacie et chymie*, 2nd ed. (Paris: Laurent d'Houry, 1689), 558, 23. Interestingly. the first (1677) edition contains no entry for specific at all.

[9] Linda Deer Richardson, "The Generation of Disease: Occult Causes and Diseases of the Total Substance," in *The Medical Renaissance of the Sixteenth Century*, ed. Andrew Wear, Roger K. French, and Iain M. Lonie (Cambridge: Cambridge University Press, 1985), 175–194.

appropriated and reconfigured by the chymical tradition. Much of its terminology, especially surrounding "occult" causes and *tota substantia*, was discarded. The vendors of "specifics" in the 1680s and the first physicians Daquin and Fagon instead make use of a distinctly chymical theoretical language. Despite this shift in terminology, many of the same themes reappear, however. Most notable in this respect are: (1) a deep skepticism of the view that disease is cured by restoring complexional balance; (2) an insistence on the importance of an unseen form or ideal (rather than manifest qualities) in both diseases and remedies; (3) a view of a direct ontological relationship between an identified disease entity and the medicinal substance; and (4) the concept of fermentation, albeit in a much-expanded chymical form.

Among chymical authors, the category of specifics overlaps considerably with the Paracelsian notion of *arcana*, particularly in its emphasis on form. Paracelsus likewise argued that "humor causes no disease. Disease is made by something else, namely *substantiae ens,*" a distinct entity.[10] An *arcanum* is the non-material formal manifestation of the virtue of a given substance, which responds to the form of the disease-being.[11] The conceptual overlap with *arcanum* is apparent in Castelli's secondary definition of "specific," which is itself taken from the chymist Martin Ruland the Younger's definition of *specificum formale* in his *Lexicon alchemiae*: a specific is there defined as restoring health "by means of its formal properties" (*per formales proprietates*), and Ruland

[10] Paracelsus, *Paracelsus (Theophrastus Bombastus von Hohenheim, 1493-1451): Essential Theoretical Writings*, ed. Andrew Weeks (Leiden: Brill, 2008), 330–331, Opus Paramirium 1:3. Weeks adds, "*Ens substantiae* signals that the cause of disease is not an insubstantial imbalance of alien humors but a disease-engendering substance, entity, or agency, hidden beneath outer physical appearances."

[11] Weeks defines it (following Ruland): "the *arcanum* is an occult and eternal incorporeal entity embodying the exalted virtue of an object or herb. It can be extracted in certain forms," Ibid., 195n1.

likewise points to the term's identification with tinctures and oils.[12] This emphasis on the formal aspects of the drug also has some overlap with later Helmontian usage of the term specific: according to the Helmontian chymist George Thomson, specifics "sully, marr, or quite expunge the Idea or Image of a Disease."[13]

Alongside the emphasis on form, the most important carry-over from the Avicennan definition to the more chymical view of "specifics," however, is that they do not cure by helping to re-balance the humors through their own manifest qualities. They are not a response to humoral imbalance (*dyscrasia*). Indeed, the traditional therapeutic armamentarium is filled with what we might call "unspecifics," drugs which were thought to provoke predictable reactions through their manifest qualities. These "unspecifics" aimed to restore a humoral balance peculiar to the individual, but could be used in various arrangements against a variety of different illnesses. To offer but one example, there is nothing therapeutically specific about bloodletting: it is a tool that could be used in a host of different conditions, often with different rationales, and used alongside a broad variety of ancillary therapies. The traditional therapeutic armamentarium of bloodletting, purgatives, emetics, diaphoretics, diuretics, etc. were intended to provoke physiological responses calibrated to alter the body's temperament through their own manifest qualities.

Perhaps the most defining aspect of "specifics" as remedies was that they did not work by provoking reactions that had the ultimate goal of re-balancing the humors. A

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[12] Castelli and Bruno, *Castellus renovatus,* 1069–1070. See above, this chapter, n. 3 for the full entry. The *Lexicon* also points out that *specificus* can also refer to diseases (*aegritudines specificae*), a category used by Paracelsus to refer to diseases "inborn" or innate to an individual, something like diathesis. On which see Weeks, ed. Paracelsus, *Essential Theoretical Writings*, 484–487.

[13] George Thomson, *Orthometodos Iatrochymike: Or the Direct Method of Curing Chymically* (London: B. Billingsley and S. Crouch, 1675), A6r.

host of wholly different concepts were invoked to explain their action. Among authors influenced by chymical medicine in this period, these tended to center on acid and alkali ferments. Specifics were thought to respond in a "radical" way to these ferments—striking at the "root cause" of a disease—which was itself seen as having a distinct formal entity. As we have seen, this view of therapy had been latent in the western medical tradition since the time of Avicenna, but would find a new, much expanded application when it was taken up by chymically-inclined practitioners in the final decades of the seventeenth century. Some of these chymical practitioners found a propitious environment at the court of Louis XIV.

2. *Court support for chymical medicine: The chymical Capuchins of the Louvre, 1678-1679*

In June 1678 the curious readers of the *Mercure galant*—the most widely circulating periodical in late seventeenth-century France—learned (among many other things) that two Capuchin fathers had recently established a pharmaceutical laboratory in the palace of the Louvre.[14] According to the *Mercure*, these Capuchins had spent time in Egypt and Ethiopia, and their courtly medical practice was aimed toward acquiring patronage for their prospective mission to save the Christians there from the "heresy of Dioscorus" (monophysitism).[15] In the meantime they prepared their chymical remedies

[14] *Mercure galant* (June 1678), 187–192. The six-page notice detailing the activities and ambitions of these chymical Capuchins was innocuously nestled between an amusing tale of suspected cuckoldry in a garrison town and a short notice on the appointment of a royal organist to the Chapelle royale

[15] The Ethiopian Church and other churches of Oriental Orthodox Christianity were labelled "monophysites" by Roman Catholic and some Orthodox theologians for rejecting the Council of Chalcedon and were thought to maintain that Christ possessed an exclusively divine nature. Jesuit missionary projects to bring Ethiopian Christians back into communion with Rome date to the mid sixteenth century. Following the expulsion of the Jesuits from Ethiopia in 1632, the Sacred Congregation for the Propagation of the Faith sent Franciscans and Capuchins to replace them. French Capuchins in particular were sent through Cairo, and two were martyred in Ethiopia as early as early as 1638. See Andreu Martínez d'Alòs-Moner, "Capuchins," *Encyclopaedia Aethiopica* (Wiesbaden: Harrassowitz, 2003); and his monograph on the Jesuits, *Envoys of a Human God: The Jesuit Mission to Christian Ethiopia, 1557-1632* (Leiden: Brill, 2015).

for the use of the court and the poor. The author highlights the efficacy and gentleness of their cures, particularly for fevers and vapours. Far from dismissing them as clerical "empirics," as some contemporaries and much later historiography has done, the *Mercure* in fact goes to some length to illustrate that they are quite learned and rest their practice on their own maxims as well as secrets culled from a variety of prominent authors:

> They have their own maxims which they follow as rules, without submitting themselves to the sentiments of Hippocrates, who they have not neglected to read but in his complete purity, without having been altered by Galen. They undertook a very serious study of Paracelsus and Van Helmont, and have said that few of their secrets are unknown to them.[16]

The *Mercure* cast the Capuchins as anti-Galenic readers of Hippocrates who also delved into the secrets of Paracelsus and Van Helmont, the two most famous iatrochemists of the age. To these credentials the *Mercure* added that Plato was their "principal philosopher," that they had mastered Arabic during their time in the East, and that knowledge of this language had allowed them to make many medical discoveries.

The chymical Capuchins of the Louvre are among dozens of unorthodox practitioners who are deployed, often superficially, as colorful furniture in survey texts on French medicine in the age of Louis XIV. The most common reference in such accounts are the letters of Madame de Sévigné (1646-1705), the famous courtly epistolarist, who was a prominent supporter of the Louvre Capuchins and avid consumer of their medications, particularly their "baume tranquille."[17] The two Capuchins were Henri Rousseau de Montbazon (1643-1694), aka Père Rousseau, and Nicolas Aignan (1644-1709), aka Père Tranquille, who shared his name with their famous balm. In spite of the

[16] "Ils ont leurs maximes qu'ils suivent pour regles, sans s'assujettir aux sentimens d'Hippocrate, qu'ils ne laissent pas d'avoir leû, mais dans son entière pureté, et sans estre alteré par Gallien. Ils ont fait une étude très-sérieux de Paracelse et de Van Elmon, et ont dit que peu de leurs secrets leur sont inconnus," *Mercure galant* (June 1678), 189–190.

[17] Madame de Sévigné, *Correspondance*, ed. Roger Duchêne (Paris: Gallimard, 1972), e.g. 1:705.

prominent news coverage they were given in the *Mercure*, the Capuchins have almost been completely ignored by modern medical historiography. They are usually evoked anecdotally, to add colorful background characters to the medical world of Louis XIV's court, or to illustrate the prominence of medical "empirics" among the regular clergy.[18] The singular exception is the 1938 work of Joseph Tournier, *Le clergé et la pharmacie*, which includes a full chapter on the Capuchins with ample citations, clears up a number of biographical and bibliographical errors, and forms the background of my discussion.[19] Most importantly, their relation to contemporary iatrochemical thought has never been elucidated, leaving the impression that, in spite of their court connections, they were merely stand-alone "empirics" separate from the major intellectual currents of late seventeenth-century medicine. In order to situate them within the broader currents of late seventeenth-century chymical medicine, this section draws on the Capuchin Aignan's *L'ancienne médecine à la mode, ou Le sentiment uniforme d'Hippocrate et de Galien sur les acides et les alkalis* (1693) and on an earlier letter the two Capuchins wrote in the early 1680s. The support they received provides a barometer of courtly interest in chymical medicine at the end of the 1670s, leading up to the arrival of another "empiric" outsider, Robert Tabor, inventor of the famous "English remedy" for intermittent fevers, at the same time as the famous Affair of Poisons (1677-1682).

At the time of their eighteen-month stay in the Louvre Palace (June 1678 to November 1679), the Capuchins had not yet published any writings on chymical

[18] To provide a recent example, Laurence Brockliss and Colin Jones refer to them as "the colourful Capuchins of the Louvre," and describe them as examples of clerical medical practice, being "among the most successful medical entrepreneurs at the court of Louis XIV": see Brockliss and Jones, *The Medical World of Early Modern France*, 258–9, 656.

[19] Joseph Tournier, *Le Clergé et la pharmacie. Essai sur le rôle du clergé et plus particulièrement des congrégations religieuses dans la préparation et la distribution des remèdes avant la Révolution.* (Paris: Caffin, 1938), 110–145.

medicine.[20] Aignan's first work, *L'ancienne médecine à la mode*, was not published until 1693, and was followed by two other works before his death in 1709.[21] His partner Rousseau did not publish in his lifetime, but two of his works were published posthumously by his brother, Rousseau de la Grange-Rouge, in 1697, and went through subsequent editions.[22] Within this corpus, Aignan's *L'ancienne médecine à la mode* is of special interest because of the theoretical outlook that it outlines, which locates him within the mainstream of late seventeenth-century iatrochemical discourse. Although published at some remove from his time at the Louvre, I will show that evidence from several contemporary documents suggests that there was a strong continuity between his outlook in 1678-79 and the views he expressed in his published work in 1693. As the above quotation from the June 1679 *Mercure* already implies, these sources show that at least one of the Louvre Capuchins was thoroughly engaged in contemporary chymical thought.

Aignan's *L'ancienne médecine à la mode* is written as a pair of "lettres en forme de dissertation" to his patron and patient, Guillaume-Egon, Cardinal of Fürstenberg

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[20] The aforementioned June 1678 issue of the *Mercure galant* records their arrival. A letter from Henri Justel to Robert Boyle dated to 21 May already mentions they are working for the king. Their departure is recounted in the December 1679 issue of the *Mercure*, which also observes that they stayed at the Louvre for eighteen months. This lines up as approximately June 1678 to November 1679.

[21] The lengthy titles of Aignan's two other published works are worth citing in full, as they neatly encapsulate his medical attitudes: *Le prestre medecin, ou, Discours physique sur l'établissement de la medecine. Avec un traité du caffé et du thé de France, selon le systeme d'Hippocrate* (Paris: Laurent d'Houry, 1696); and *Traité de la goutte dans son etat naturel; ou, L'art de connoistre les vrais principes des maladies: avec plusieurs remedes conformes au systême d'Hippocrate, de Galien, et de Vanhelmont, qui se trouve dans son vray jour, développé du faux langage et de la fausse opinion* (Paris: Claude Jombert, 1707). On Aignan's publications see Tournier, *Le clergé et la pharmacie* 143–144. Also note the confusion of names: *François* Aignan, to whom these works are sometimes erroneously attributed, was the nephew of the former Capuchin and Padua doctor *Nicolas* Aignan (see below on his transfer to the Cluny Benedictines and his possible degree from Padua). François for his part was received as doctor by the Paris Faculty in 1703.

[22] These are: Henri de Montbazon Rousseau, *Secrets et remedes éprouvez : dont les préparations ont eté faites au Louvre, de l'ordre du roy* (Paris: Jean Jombert, 1697); *Préservatifs et remèdes universels tirez des animaux, des végétaux et des minéraux* (Paris: Claude Cellier, 1706); and *Secrets et remedes éprouvez : dont les préparations ont été faites au Louvre, de l'ordre du roy [...] Seconde Edition corrigée et aumentée des Préservatifs et Remedes universels*, 2nd ed. (Claude Jombert, 1708).

(1629-1704), a powerful supporter of Louis XIV in the Rhineland.[23] In it, Aignan has two interrelated goals: the first is to explain the pathological views and course of therapy he has followed in the particular case of the Cardinal's digestive problems, and the second is to defend himself against the charge of being a "modern" by showing that the chymical theory that undergirds his pathology and therapy is perfectly supported by ancient Hippocratic ideas, which he himself follows in his rejection of the traditional Aristotelian-Galenic qualities (hot, cold, wet and dry).

The Cardinal apparently suffered from debilitating digestive problems which Aignan attributed to a disordered acidic ferment in his stomach, which instead of properly digesting his food into chyle, transformed it into a viscous coagulum that corrupted his blood and released dangerous vapours throughout his body.[24] Having identified the nature of the illness as acidic, Aignan followed the basic principle of neutralization in his therapy, administering strong alkalis as remedies: these included decoctions of chicory in coffee, crystallized salt of wormwood, and "essence of vipers," all aimed at breaking up the coagulum produced by the disordered acidic ferment in the Cardinal's stomach.[25]

As this brief summary suggests, we can class the Capuchin Aignan as a proponent of the then-popular acid-alkali theory. Evan Ragland has recently detailed this theory in his dissertation on the long history of experiments surrounding digestion, beginning with those of the Leiden medical professor Franciscus Sylvius de le Boë (1614-1672).[26] In

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[23] See Louis Châtellier, "Fürstenberg, Guillaume Egon de," in *Nouveau dictionnaire de biographie alsacienne*, vol. 12 (Strasbourg: Fédération des Sociétés d'Histoire et d'Archéologie d'Alsace, 1988), 1083.

[24] Nicolas Aignan, *L'Ancienne médecine à la mode, ou le sentiment uniforme d'Hippocrate & de Galien sur les acides & les alkalis* (Paris: Laurent d'Houry, 1693), 95–98.

[25] Ibid., 153–154.

[26] Evan R. Ragland, "Experimenting with Chemical Bodies: Science, Medicine, and Philosophy in the Long History of Reinier de Graaf's Experiments on Digestion, from Harvey and Descartes to Claude Bernard" (Dissertation, Indiana University, 2012); for earlier accounts see Marie Boas, "Acid and alkali in seventeenth century chemistry," *Archives internationales d'histoire des sciences* 9 (1958): 13–28; and

broad terms, the acid-alkali theory was based initially on an examination of the chymical physiology of digestion that was eventually extended to serve as a flexible alternative to traditional humoral pathology. Diseases were understood as an excess of acidity or alkalinity produced by a disordered digestive ferment, usually originating in the stomach, and therapy was framed as process of neutralization, typically using alkalis to neutralize the unnatural acids in the digestive tract. While earlier accounts of the acid-alkali theory identified it as being first devised by Sylvius, Ragland has shown that Sylvius in fact derived much of it from a "materialist" reading of Van Helmont, whose writings were already circulating in manuscript form in the early 1640s.[27] I follow Ragland in tracing the acid-alkali theory back to Van Helmont and also acknowledge his points about important variants in the acid-alkali theory, notably between the versions of Sylvius and of the German chymist Otto Tachenius (d. 1670).[28]

Aignan also fits within established chymical currents in his approach to legitimizing his medical views. He very explicitly defends himself against the charge of being a "modern" innovator with no respect for antiquity through an appeal to what might be called "the chymical Hippocrates." In his work on the Paracelsian Petrus Severinus (1542–1602), Jole Shackelford has described this apologetic and exegetical project as "the extraction of a chemical Hippocrates," from the "corrupt base matter of Galenism."[29] This project began with Severinus in the late sixteenth century and continued to inform

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Allen G. Debus, *Chemistry and Medical Debate: Van Helmont to Boerhaave* (Canton, MA: Science History Publications, 2001), 103–137.

[27] Ragland, "Experimenting with Chemical Bodies," 25, 82–91.

[28] Ibid., 361–382. On Tachenius see Marie Boas Hall, "Tachenius, Otto," in *Dictionary of Scientific Biography*, vol. 13 (New York: Scribners, 1976), 234–35; and Heinz-Herbert Take, *Otto Tachenius, 1610-1680: ein Wegbereiter der Chemie zwischen Herford und Venedig* (Bielefeld: Verlag für Regionalgeschichte, 2002).

[29] Jole Shackelford, "The Chemical Hippocrates: Paracelsian and Hippocratic Theory in Petrus Severinus' Medical Philosophy," in *Reinventing Hippocrates*, ed. David Cantor (Aldershot: Ashgate, 2002), 60.

iatrochemistry throughout the seventeenth, including such prominent proponents as Van Helmont and Tachenius. The goal was to use the Hippocratic corpus itself to challenge traditional Galenism and provide a legitimating ancient foundation for contemporary iatrochemistry. Like Severinus in is 1571 *Idea medicinae*, Aignan leans heavily on the Hippocratic treatise *On ancient medicine* (*De vetere medicina*) to problematize the traditional qualities:

> I declare alongside all of antiquity that heat can be neither the origin nor the cause of any disease, of whatever nature it might be. On this Hippocrates has formally declared himself, maintaining that *all that is called disease—without excepting even fever, which seems to have a very great fire—are beings which subsist independent of cold and heat, which are merely accidents that accompany them; that these beings are salts composed of their own matter and form, subsisting by themselves without the support of these qualities*, which indeed make them recognizable, but which do not produce them.[30]

This passage neatly encapsulates Aignan's views on the purely accidental nature of "qualities," affirming instead the primacy of bitterness (*amarum*), acidity (*acidus*), saltiness (*salsus*) over what he saw as imprecise subjective concepts like "heat."[31] This view is supported with two passages from Hippocrates *De vetere medicina* (15.4, 17.2), the latter of which was frequently quoted by Van Helmont and seems to have been a Hippocratic touchstone for proponents of chymical medicine seeking to question the four qualities.[32] The ill-defined quality of "heat" will never truly be defeated by its contrary,

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[30] "Je dis avec tout l'antiquité que la chaleur ne peut être le principe ni la cause d'aucune maladie, de quelque nature qu'elle puisse être. C'est sur quoy Hippocrate se déclare formellement, prétendant que *tout ce qui s'appelle maladie, sans en excepter la fièvre même, qui semble avoir un plus grand feu, sont des êtres qui subsistent indépendamment du froid et du chaud, qui ne sont que des accidens qui les accompagnent; que ces êtres sont de sels qui sont composez de leur matiere et de leur forme, subsistant par eux-mêmes sans le secours de ces qualitez*, qui les font bien à la verité reconnoître, mais qui ne les produisent pas," Aignan, *L'Ancienne médecine à la mode*, 15–17. Emphasis added.

[31] For an exploration of Aristotle's views on heat, see Gad Freudenthal, *Aristotle's Theory of Material Substance: Heat and Pneuma, Form and Soul* (Oxford: Clarendon, 1995).

[32] The passage as quoted by Aignan is: "Non enim calidum est, quod magnam caloris vim habet; sed quod acerbum est, lene, caeteraque habet quae diximus, quae et in ipso homine insunt et extra : quod puto maximum argumentum esse homines propter calorem calidumve febre non corripi : nec hoc est cur male habeant, sed causa est, quod calidum amarum est, acidum, acre, salsum, caeteraque multa."

"cold," but an acid (*acidus*) can be neutralized by a bitter (*amarum*) alkali. Aignan here goes so far as to say that he is sure that all the physicians of the French court would support him in his contention that the opinion of Hippocrates crushes the "vulgar error" of hot and cold as qualities.[33] Later, he also supports his position through reference to the unusual two-principle theory of water and fire as the constituents of the human body expounded the Hippocratic *Regimen I* (*De dieta*) by translating them as acid and alkali.[34]

But how and why does neutralization "work" as a therapy? Aignan offers no clear answer to the question, but his thinking is at least implicitly corpuscular: the damaging points of the acids must be blunted or muffled (*émousser*) by alkalis,[35] a view which would be well in keeping with those of Tachenius, François de Saint-André, and Nicolas Lémery, who all described points as characteristics of acids and pores as characteristics of alkalis.[36] This therapeutic neutralization is an effort directed at re-establishing the

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This quotation mixes two passages from *De vetere medicina*: 15.4 (before the first colon) and 17.2 in Schiefsky ed. *On Ancient Medicine*. The context of 17.2 is in fact a discussion of fevers which describes heat as a mere adjunct or auxiliary (*adiunctum*) to more important qualities like bitterness, acidity, etc. (all supposedly "secondary" by later Aristotelian and Galenic standards). Rather than the more recent transaltion of Anuce Foës (available in multiple editions from 1595 onward), Aignan uses the older translation of Fabio Calvo (probably in a later edition than that cited here, from 1526): "Liber de prisca medicina," in *Hippocratis coi medicorum omnium longe principis, opera* (Basel: Andreas Cratander, 1526), 10.

The latter passage (17.2) is also cited by Van Helmont on at least five occasions: *Ortus medicinae* (Amsterdam: Elzevir, 1648), 153 ("Blas humanum" 52), 320 ("Plura furens" 17), 379 ("Potestas medicaminum" 12), 396 ("Ignotus hospes" 52), 424 ("Introductio diagnostica" 11), 741 ("De febribus" 32).

Shiefsky renders these passages as follows in his recent translation from the Greek: "For it is not the hot that has great power, but the astringent and the insipid and all the other things I have mentioned, both inside and outside the human being" (15.4), and "I think it is my strongest piece of evidence that it is not simply because of the hot that people are feverish, and that this is not the only cause of harm; rather, one and the same thing is both bitter and hot, acid and hot, salty and hot, and myriad other combinations—and again cold, too, is conjoined with other powers" (17.2), Schiefsky, *On Ancient Medicine* 94-97. See also *Les Admirables qualitez du kinkina*, 14. On the qualities as mere subjective, human concepts, rather than true causes, which emerge from ideas, forms, and seminal principles, see Aignan, 20-21.

[33] Aignan, *L'Ancienne médecine à la mode*, 18–19.

[34] Ibid., 57.

[35] Ibid., 52, 107.

[36] Ragland, "Experimenting with Chemical Bodies," 375; see also Lawrence M. Principe, "Revealing Analogies: The Descriptive and Deceptive Roles of Sexuality and Gender in Latin Alchemy," in *Hidden Intercourse*, ed. Wouter J. Hanegraaff and Jeffrey J. Kripal (Leiden: Brill, 2008), 209–30, on the use of sexual analogies by Tachenius to explain this process ("phallic" acids "vacuous" alkalis).

normal process of digestion, which itself is driven by the action of a "vital acid" on food followed by the introduction of a neturalizing alkali bile from the spleen.

Despite this corpuscular language, it cannot be said that Aignan followed a strictly materialist version of the acid-alkali theory. As noted in the passage above, diseases, including fevers (an important point to emphasize here for the following sections), are "beings" (*êtres*) which subsist "entirely independently of qualities like hot and cold." While in this passage diseases are equated with acid and alkali salts, *L'ancienne médecine à la mode* includes numerous references to non-corporeal entities and his explanations of these bear a distinctly Helmontian flavour and vocabulary. As Aignan notes a few pages later, only ideas, forms, or "seminal principles" can be described as true causes.[37] Referring specifically to pathology, he observes "Heat is but an effect and not at all the cause of our ills, assuming always a primary being which holds the place of *seminal principle*, which produced in man the *bad fruit* which we call disease."[38] The notion of seminal principles placed in the world by God at creation had wide applications in this period, explaining the generation of animals, plants, minerals, and even diseases.[39] The idea of the seeds of disease (*semina morborum)* being sown in human bodies can be found in earlier Paracelsian authors, most notably Severinus.[40] While essentially formal and non-corporeal, these entities can rearrange matter, producing pathological processes in the human body. The *semina* find an analogue in the

[37] Aignan, *L'Ancienne médecine à la mode*, 20–21.

[38] "La chaleur n'est qu'un effet, et non point la cause de nos maux, supposant toujours un être premier qui tient lieu de *principe seminal*, qui produit dans l'homme un *mauvais fruit* qu'on appelle maladie," Ibid., 33. Emphasis added.

[39] Although he does not discuss *semina morborum* in detail, on the broader history of the semina concept, see Hiro Hirai, *Le concept de semence dans les théories de la matière à la renaissance: de Marsile Ficin à Pierre Gassendi* (Turnhout: Brepols, 2005).

[40] Jole Shackelford, *A Philosophical Path for Paracelsian Medicine: The Ideas, Intellectual Context, and Influence of Petrus Severinus (1540/2-1602)* (Copenhagen: Museum Tusculanum Press, University of Cophenhagen, 2004), 17, 185–194.

Helmontian understanding of the occasional cause of disease as the arrival of a "foreign guest" in the human body a view which Walter Pagel referred to as an "ontological" conception of disease.[41]

Although the concept of disease *semina* is common to this broader post-Paracelsian chymical tradition, Aignan's view of pathology also betrays a number of specifically Helmontian features. Most notably, he makes consistent reference to a quintessentially Helmontian entity, the archeus (*l'archée*). According to Van Helmont, normal physiological processes as well as pathological processes depended upon a non-corporeal vital principle called the archeus. Disease is a manifestation of the corporeal and non-corporeal interaction between the archeus and the "foreign guest." Although the chief archeus is "seated" in the "mouth of the stomach" and governs digestion, all physiological processes and their related organs are likewise governed by lesser archei. Disease often begins in the stomach, but the disordered fermentation there soon spreads acid salts throughout the body. Disease, produced by the interaction between an archeus and the non-material "foreign guest," then spreads throughout the body, "specifies itself" differently (*se specifie differemment*) depending on which local archei are irritated.[42] Likewise, Aignan acknowledges that some diseases require no material salt whatsoever, and can be caused by "an archeus irritated by passions which take the place of salts."[43] This appears to be Van Helmont's non-corporeal "idea of indignation" which can spread

[41] Walter Pagel, *Joan Baptista van Helmont: Reformer of Science and Medicine* (Cambridge and New York: Cambridge University Press, 1982), esp. 141–154; Walter Pagel, "Van Helmont's Concept of Disease - To Be or Not To Be? The Influence of Paracelsus," *Bulletin of the History of Medicine* 46, no. 5 (1972): 419–54; for a longer view of this question, see the classic essay by Owsei Temkin, "The Scientific Approach to Disease: Specific Entity and Individual Sickness," in *The Double Face of Janus and Other Essays in the History of Medicine* (Baltimore: Johns Hopkins University Press, 1977), 441–55.

[42] Aignan, *L'Ancienne médecine à la mode*, 60–61.

[43] " Il est encore vray qu'il y a des maladies qui ne supposent aucun sel, mais seulement un archée irrité par des passions qui tiennent lieu des sels," Ibid., 30–31.

to an archeus independent of any material vessel (much like the non-corporeal disease *semina*) and trigger the pathological process which generates the material manifestation of a disease.

Many of these ideas can also be found in a short letter the Capuchins addressed to Henri Justel. Formerly a secretary to Louis XIV, Justel was a Huguenot who immigrated to England before the Revocation of the Edict of Nantes, becoming librarian at St James' Palace. The Capuchins likely knew him from their time at the Louvre. The letter was written to Justel c. 1681-1686, forwarded on to Robert Boyle, and copied by his amanuensis Robin Bacon.[44] There the Capuchins express their interest in establishing an association with the English *curieux* in their project to work in common with them to reform medicine:

> We must work in concert on a Philosophy of Practice in which Medicine shall find a new dawn without changing the system of Hippocrates, Plato, Paracelsus, and Van Helmont, which we have reduced to a mutual concordance of Thoughts and Operations which will one day surprise many people—especially the Faculty of Galen.[45]

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[44] "François Aignan [sic, Nicolas Aignan, see above note] and Henri Rousseau de Montbazon to Henri Justel," in *Correspondence of Boyle* 6:440-445, citing the original as BL 2, fols. 130-1, where it is entitled "Abstract of a letter from two Capucins to Mr. Justel from Nants."

There are some ambiguities in dating this document. The editors of the Boyle correspondence associate it with a letter written by Justel to Boyle on 21 May 1678. This letter does in fact mention the Capuchins in a postscript, observing "Il y a ici des Peres Capucins que le Roi faict travailler qui ont une estime particuliere pour vous et qui voudroient bien pouvoir vous entretenir de ce qu'ils ont decouvert. Monsieur Watson estoit leur bon ami. Ils ont connoissance de qu'il a fait dans le Levant," *Correspondence of Boyle*, 5:90. (The identity of this Watson is unclear).

The actual letter from the Capuchins to Justel survives only in a copy made by Boyle's amanuensis Robin Bacon and is dated by the *Correspondence* editors as c. 1678 because of this reference in the letter from Justel to Boyle, but internal and corroborating evidence suggests a later date. The Capuchins refer to their departure from the Louvre ("depuis nostre sortie du Louvre"), which occurred in November 1679, make reference to being in Brittany, which places it after 1681; and they still sign as Capuchins, which places it before 1686, when they were transferred by order of the Pope to the Cluny Benedictine order. See Tournier 124-30. Thanks to Lawrence M. Principe for bringing this letter to my attention.

[45] "Nous devions travailler de concert a une Philosophie di [de] Practique ou la Medicine auroit Trouvé un nouveau jour sans changer li [le] Systeme d'Hypocrate, de Platon, de Paracelse è [et] Vanhelmont, que nous avons reduit a un concours mutuel de Pensees e [et] d'Operations que [qui] surprendront quelque jour bien de gens, mais sur tout la Faculte de Galen," *Correspondence of Boyle*, 6:441.

Since leaving the Louvre, they boast that they had read through the works of Hippocrates three times, found in them the means to destroy Galenic medicine "par son propre Système," treated an infinite number of patients, and devised new "Remèdes particulieres," including remedies for all of the fevers "bien plus commode que celuy du médecin Anglois," that is, Robert Talbor, subject of the next section of this chapter.[46] The Capuchins also refer to a sudorific remedy they have devised which cures gout by ensuring that the innate *semina* of disease remain weak and do not produce any fruit.[47] They pass through their catalogue of remedies, observing that their famous "baume tranquille" has important military applications in treating wounds, and could do much good for the army and navy. They observe that the public would greatly benefit not just from their remedies but also from a course they could teach on "les raisons de la nature et de la Phisique," should it please Louis XIV "or some other prince" to command them to deliver it, a qualifier which suggests they were fishing for English patronage.

The reporting of the *Mercure galant* suggests that the testing and distribution of their medications to the army, particularly their febrifuge, played an important part in their activities while they were staying at the Louvre. Indeed, their febrifuge's reputation for success in Louis XIV's armies inadvertently led to a scandal over the death of Thomas Carpatry, a *commis* (clerk or official) serving the War Secretary, François-Michel Le Tellier, Marquis de Louvois (1641-1691). Carpatry, who was suffering from a fever, had died while under their care as well as that of several other physicians, and the critics of the Capuchins, including at least one of the physicians who was also at

[46] Ibid., 6 :442.

[47] They refer to "la Semince de ce cruel mal qui est en l'homme auparavant l'ame y demeure desormais faible, infeconde, et inutile, sans y produire aucun fruit," Ibid., 6 :443.

Carpatry's bedside, had blamed his death on their febrifuge. An unnamed bishop, who favoured the Capuchins, wrote a public letter to the *Mercure* asking them to dispel this rumour. The Capuchins responded in the pages of the *Mercure*, offering a detailed account of the case. They reported that Carpatry had asked them to his bedside because his place in the war office had placed into his hands "an infinite number of letters which testify that our febrifuge has worked wonders in the army"[48] and that they were very reluctant to do so given the gravity of his condition and the presence of the other physicians, who had let his blood three times and administered no less than three doses of the antimonial *vin émétique*. Like Van Helmont, the Capuchins were strongly opposed to both therapies.

Although both previous and subsequent issues of the *Mercure* depict the Capuchins as enjoying the support of the royal court and the people of Paris through their charitable practice, the Carpatry controversy shows that by November 1678 they had found important critics. The most vocal of these critics was an unnamed physician—perhaps a young Paris Faculty doctor—that penned attacks on them in the *Mercure* and may also have been involved with the publication of a stand-alone libel against them signed under the pseudonym "Alithon," entitled *Réflexions sur la vanité outrée des Pères Capucins qui sont au Louvre* (1679). This short pamphlet criticized the Capuchins as clerics meddling in medicine and specifically targeted an engraving of them in their

[48] "…une infinité de Lettres [...] qui assuroient que nos Febrifuges avoient fait des merveilles dans les Armées," *Mercure galant* (November 1678), 95. The use of the Capuchins' remedies in the army is corroborated by the previous issue of the *Mercure*, which likewise observes their febrifuge had been tested by surgeons at Fontainebleau and found effective: "On écrit des Hospitaux de l'Armée, que le Remede qu'ils appellent Febrifuge, y fait des miracles. Les chirurgiens du roy en font des épreuves à Fontainebleau, qui ne laissent aucun lieu de douter de sa bonté," *Mercure galant* (September 1678), 246. The Capuchins also expound on the military applications of their drugs in their letter to Justel, *Correspondence of Boyle* 6:443-444.

laboratory which had been published as a plate in the *Mercure* (see Appendix 3, Figure 2).

Like Aignan's later account of his cure of the Cardinal of Fürstenberg in *L'ancienne médecine à la mode*, the description the Capuchins provided of Carpatry's case in the *Mercure* implicitly testifies to a iatrochemical theory of disease, and also mounts a substantial critique of the use of the *vin émétique*, which they describe as a poison. Indeed, they argue that it was the *vin émétique* that killed Carpatry, not one of their *essences*. Their critics pointed toward the gangrene found in the patient's intestines during the post-mortem as a sign of the excessive "heat" of their remedies, but the Capuchins argued that this sign stands against their accusers (whom they identify as the five physicians present) and that their critics must be ignorant in the principles of both medicine and chymistry: *essences* like their febrifuge are volatile and provoke sweating, "resolving" and carrying the febrile impurities and excrements upward following the habit (*l'habitude*) of the body itself, not downward, as is proper with substances like the *vin émétique*. To illustrate this point they provide an amusing and quintessentially chymical analogy: they suggest that if one of their imprudent critics had taken some of their *essence* in a corked glass vial and placed it somewhere hot, they would find that the essence would not fall to the bottom as sediment but rather would rise up as a vapour; and that if the vial had pores like the human stomach, it would escape completely and leave nothing at all in the bottom.[49] The patient is literally depicted as a corked test-tube.

The Capuchins offer another illustration, that of their success in treating "ce petit prince," the Duke of Chartres (Philippe II, later Duke of Orléans and Regent, then only a few years old), for which the author of the *Mercure* had praised them a few pages earlier.

[49] *Mercure galant* (November 1678), 118-123.

In that case too, the action of their drugs, in this case their *essence de vipère*, was nearly sabotaged by the physicians repeatedly administering the *vin émétique*, which in each case brought on a series of convulsions that only stopped when they gave the prince more of their *essence*. Then too their rivals accused them of using overly "hot" remedies: to this they asked, rhetorically,

> Is it in this case a hot or cold essence which sustains and tempers the violence of a caustic and boiling remedy [the *vin émétique*]? One might say that it is viper, which is believed to be one of the hottest medicines in the world; but we would say that only we know what it is, and others must judge it by its effect.[50]

The Capuchins argued that their remedies simply elude the simplistic qualities of the Galenists, who, without knowing their true "secret," can only judge them by their effects—like empirics.

In both of these cases, the Capuchins draw on a decidedly chymical understanding of pathological processes which forms the basis of their arguments against the Galenic physicians, who were using a violent chemical remedy, the *vin émétique*, which had since 1666 been officially accepted even by the doctors of the Paris Faculty.[51] The apparent contradiction of the reputedly anti-chymical faculty doctors administering a chemical-based remedy and being opposed by chymical practitioners paints a much more complex picture of medicine in Paris and at the French court in the late seventeenth century than the existing historiography might suggest.

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[50] "Est-ce là une Essence chaude ou froide, qui soûtient et tempere la violence d'un Remede caustique et boüillant [the *vin emetique*]? On dira que c'est du Vipere, qui est crû un des plus chauds Médicaments du monde; et nous dirons qu'il n'y a que nous qui sçavons ce que c'est, et que les autres en doivent juger par ses effets," Ibid., 129-130.

[51] On the "querelle," see the above note, especially Pascal Pilpoul, *La querelle de l'antimoine : essai historique*, Doctoral thesis. University of Paris. (Paris: Louis Arnette, 1928); Kahn, "Paracelse, l'antimoine et le vin émétique"; Labrousse and Soman, "La querelle de l'antimoine : Guy Patin sur la sellette."

The letter to Justel and the pages of the *Mercure* also presents us with a more nuanced picture of the Louvre Capuchins than the one available in the existing historiography. Aignan in particular emerges from *L'ancienne medecine à la mode* not as an "empiric" so much as a theoretically articulate iatrochemist, a "chymical Hippocratic" informed by the acid-alkali theory and by a distinctly Helmontian theory of disease. Most of the Capuchins' ideas were not particularly original: I have found well-known sources for all of those expounded here, in many cases decades if not a century old. They can thus be contextualized within the mainstream of seventeenth-century chymical discourse.

But what can Aignan and his partner Rousseau's sojourn at the Louvre tell us about the acceptance of chymical medicine at the court of Louis XIV? The material support the Capuchins received from the crown presents a useful starting point. Beyond their generous pension of 1,000 *livres* (a typical figure for court practitioners), they also received a laboratory equipped at the crown's expense. The ledger of the Compte des Bâtiments du Roi shows that the total sum spent during the first six months of their time at the Louvre, from 30 May to 16 December 1678, is upwards of 3,840 *livres*, well over double the average annual pension for royal physicians in ordinary and members of the Académie royale des sciences, with about half of this being spent on laboratory equipment and supplies—everything from "drogues, allambics, fiolles de verre" to 150 bushels of juniper berries.[52]

This laboratory enabled them to produce remedies that could be charitably distributed among the poor of Paris, but as the pages of the *Mercure* make clear, the

[52] Tournier, *Le Clergé et la pharmacie*, 114–118; Jules Guiffrey, ed., *Comptes des bâtiments du roi sous le règne de Louis XIV*, vol. 1 (Paris: Imprimerie nationale, 1881), 1024, 1108, 1109, 1111; David J. Sturdy, *Science and Social Status: The Members of the Academie Des Sciences 1666-1750* (Woodbridge, Suffolk: Boydell Press, 1995), 153–156.

Capuchins also personally treated elite patients, from senior government bureaucrats like Carpatry to princes of the blood like the Duke of Chartres, as well as Madame de Sévigné, the President of the Paris Parlement, and later the Duke of Chaulnes in Brittany (as we shall see). The king himself graciously accepted a small cellar's worth of their remedies, and one of their *essences* is alleged to have helped him recover from an arm injury he sustained while playing tennis. Indeed, the *Mercure* report on them for September 1678 observes that the people of Paris and the "personnes de marque" in particular were indebted to the Capuchins and to Talbor ("le Médecin Anglois") for maintaining their health during what was an unusually hot summer, and that they had also worked marvels in the army.[53]

The material support that the Louvre Capuchins were provided through their lab and pension, for their service to court patients, to the poor of Paris, and to the armies of Louis XIV, stands as a hitherto unrecognized example of substantial royal patronage being directed to chymical medicine in this period. The laboratory of the Louvre Capuchins may stand as one of the most substantial royal investments in iatrochemistry in the latter seventeenth century. This places it alongside the courses in chymistry taught at the Jardin du Roi since the time of Guy de la Brosse and William Davisson, and the chymists like Samuel Cottereau Duclos who were supported by the Académie.[54] This is particularly notable because it occurred simultaneously with the Affair of Poisons, which

[53] "On écrit des Hospitaux de l'Armée, que le Remede qu'ils appellent Febrifuge, y fait des miracles. Les chirurgiens du roy en font des épreuves à Fontainebleau, qui ne laissent aucun lieu de douter de sa bonté," *Mercure galant* (September 1678), 246.

[54] On the Jardin as a locus for chymistry, see esp. Jean-Paul Contant, *Contribution à l'histoire de l'enseignement de la pharmacie: l'enseignement de la chimie au Jardin Royal des Plantes de Paris.* (Cahors: A. Coueslant, 1952).

Lawrence M. Principe has shown posed important challenges to the public image of chymistry in France during this period.[55]

This raises one final question, that of the reason for the departure of the Capuchins from the Louvre in late 1679. While it might be tempting to associate their departure with the Affair of Poisons and a general desire on the part of the court to disassociate itself from chymistry, increasingly closely associated with poison in the eyes of the public, our main sources, namely Madame de Sévigné and the *Mercure*, attribute their departure to other causes. Both indicate that the Capuchins were leaving Paris for Egypt or Ethiopia, and Madame de Sévigné also points to their medical critics as culprits: "the physicians are cruel and have taken away from the public admirable and disinterested folk who were in truth making prodigious cures."[56] The *Mercure*, however, accounts for their departure by laying the emphasis on their planned mission to Ethiopia, for which Louis XIV had given them letters of recommendation: their stay in Paris was always intended to be temporary, and their practice of medicine was always only an accessory to their true goal, namely, to use their medical skills to gain inroads in Ethiopia and bring the Christians there into communion with the Church of Rome.[57]

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[55] Lawrence M. Principe, "The End of Alchemy?: The Repudiation and Persistence of Chrysopoeia at the Académie Royale Des Sciences in the Eighteenth Century," *Osiris* 29, no. 1 (2014): 96–116.

[56] "Les médecins sont cruels et ont ôté au public des gens admirables et désintéressées, qui faisait en vérité des guérisons prodigieuses," Madame de Sévigné, *Correspondance*, 2:742. See also Tournier, *Le Clergé et la pharmacie*, 123.

[57] The interest of Ethiopian kings in European medicine is also testified to by the case of the French explorer and physician Charles Poncet, who travelled to treat the Negus Iya'su I (1682-1706) and his son or a "skin ailment" in 1698. See Theodore Natsoulas, "Charles Poncet's Travels to Ethiopia, 1698-1703," in *Distant Lands and Diverse Cultures: The French Experience in Asia, 1600-1700*, ed. Glenn Joseph Ames and Ronald S. Love (Westport, Conn.: Praeger, 2003), 71–95. Citing an account by the Scottish explorer James Bruce (75), written seventy years later, Natsoulas also makes reference to two Capuchins who are alleged to have cured a Muslim merchant with court connections, Hadji Ali, who intended to bring them back to Ethiopia, only to have the French Consul, Bernard de Maillet, send Poncet instead. Could these be the Louvre Capuchins? Poncet arrived in Cairo in 1691, well after the period of the Capuchins in Egypt, which was probably the early to mid 1670s; they could have made a second journey to

Their mission never got off ground due to financial difficulties and over a year later they would be back in Paris for a short time, and from there to Brittany, where they found patronage with Charles d'Albert d'Ailly, Duke of Chaulnes and Governor of Brittany, and continued producing their remedies. Joseph Tournier and Édouard Guéguen have traced their activities in Brittany, where they continued to supply their remedies to elite patrons like Madame de Sévigné as well as to the poor, and where they appear to have been involved in a conflict with the apothecaries of Vannes, who filled their prescriptions with spoilt medication, as is mentioned in a 1684 *arrêt* of the Brittany Parlement.[58] While the apothecaries were bound by the Parlement to fill their prescriptions correctly, the Capuchins would face greater challenges from the local provincial vicar of their order, whose protestations against their practice of medicine eventually led to their transfer—by papal intervention—to the more liberal Cluny Benedictine order. After this point, they can no longer be called the Louvre Capuchins (being neither Capuchins nor based in the Louvre) and are usually referred to as Pères Rousseau and Aignan (or Tranquille). Both spent little time at their new abbey, and continued practicing medicine. In 1690 they were granted a laboratory privilege in Paris, where Aignan appears to have resided. Interestingly, Aignan is listed in Blégny's 1692 *Livre commode des addresses* among the ordinary physicians as a doctor from the Faculty of Padua, a distinction which also appears on the cover of his *L'ancienne médecine à la mode*, published at this time, although it is unclear how or when he

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Egypt, but attestations of their presence in Brittany through most of the 1680s and Paris in the 1690s would seem to preclude this.

[58] Tournier, *Le Clergé et la pharmacie*, 124–144; Édouard Guéguen, "Les Pères Capucins du Louvre en Bretagne au XVIIe siècle," *Revue d'histoire de la pharmacie* 48, no. 164 (1960): 290–92. Guéguen cites records of the legal battle with the apothecaries from the AD Ille-et-Vilaine.

received this degree.[59] Aignan seems to have practiced and published in Paris until his death in 1709. Rousseau continued on as a physician to the Duke of Chaulnes, but died earlier, in 1694; as mentioned above, his brother published his writings and recipes posthumously.[60]

The case of the Chymical Capuchins of the Louvre is useful for establishing the prominence of chymical medicine at court on the eve of Robert Talbor's arrival and serves as a reminder not to define chymical medicine narrowly as the use of mineral-based therapeutic substances. Most of the Capuchin's cures were plant or animal-based, and their chymical ideas emerged most vividly in their accounts of pathology, therapy, and physiology, as well as in the laboratory practices through which they processed and purified therapeutic substances. Much the same is true of debates surrounding Robert Talbor's cinchona-based *remède anglois*, as it came to be called in France.

### 3. *Robert Talbor's remède anglois in France, 1679-1681*

Another example of the prominence of chymical theories of disease and therapy at the French court is provided by the events and debate surrounding the popularization and eventual disclosure of Robert Talbor's secret *remède anglois* (the English Remedy) against intermittent fevers. The work of the medical journalist and surgeon Nicolas de Blégny in collaboration with the first physician Antoine Daquin provides a particularly poignant manifestation of the prominence of disease ferments (*levains*) and acid-alkali therapeutics at the highest levels of court medicine in this period. The same set of chymical ideas was invoked a decade later in one of the few publications of Daquin's

[59] Aignan's status is a Padua doctor is not mentioned in any earlier sources that I have seen, including the *Mercure* reports. The Padua registers have only been published for up to the year 1600, which prevents me from being able to easily check whether and when he graduated: see Gaspare Zonta and Johanne Brotto, eds., *Acta graduum academicorum Gymnasii Patavini*, 5 vols. (Padua: Antenore, 1970-).

[60] Rousseau, *Secrets et remedes éprouvez*, 1697.

successor, Fagon, and so it offers us a window onto the pathological and therapeutic concepts of the two first physicians who oversaw the pre-1728 privilege regime at the peak of its activity.

The prominence of chymical ideas in the debates surrounding cinchona more generally has gone largely unrecognized, despite the fact that Talbor's *Pyretologia* includes direct citations of Van Helmont and the subsequent debates surrounding the action of the drug were conducted using chymical terms.[61] This may be due in part to a persistent tendency to assume that chymical medicine is reducible to the therapeutic use of mineral substances, which obscures the more complex role that chymical ideas played in the reception of exotic plant substances like cinchona bark.[62]

The bark itself is of course well known in the history of medicine, thanks in part to the later reputation of quinine, the antipyretic alkaloid of which it is the source. Cinchona is frequently mentioned in accounts of colonial botany and bioprospecting, and the long history of its European reception has been surveyed by Saul Jarcho and others.[63] The latter efforts of French officials to develop French sources of the bark in the 1730s

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[61] The sole exception is Fiorella Lopiccoli, who has recently pointed to the role of iatromechanical and iatrochemical ideas in these debates, but the topic has not been pursued any further: Fiorella Lopiccoli, "Francia 1679-1683: l'uso terapeutico della chinachina tra iatrochimica e iatromeccanica," *Medicina & Storia* 7, no. 13 (2007): 65–93. Lopiccoli recognizes a link to Thomas Willis and fermentation, but neglects the place of this debate within the broader iatrochemical tradition of chymical ferments and the acid-alkali theory.

[62] For example, in Jarcho's account of cinchona, the only reference to chymical medicine is his discussion of antimony, which he paints as the foil and "principal rival" of cinchona as febrifuge, and which he estimates was used far more frequently than cinchona in France before the arrival of Talbor's *remède anglois.* Jarcho also lauds Blégny's condemnation of Lémery's acid-alkali theory, but fails to acknowledge that it still provides the main source for his own account of the drug's action (as I will suggest below, Blégny doth protest too much). See Saul Jarcho, *Quinine's Predecessor: Francesco Torti and the Early History of Cinchona* (Baltimore: Johns Hopkins University Press, 1993), 65, 75–78.

[63] On cinchona's reception in Europe, see esp. Jarcho, *Quinine's Predecessor*; Andreas-Holger Maehle, *Drugs on Trial: Experimental Pharmacology and Therapeutic Innovation in the Eighteenth Century* (Amsterdam: Rodopi, 1999), 233–209.

The forthcoming monograph of Samir Boumediene, *La colonisation du savoir. L'appropriation des plantes médicinales américaines par les Européens (1570-1750)* (Paris: Alma Éditeur, forthcoming), promises to shed much light on the question of cinchona's appropriation and reception in Europe, but was not yet released when this dissertation was submitted.

has received recent attention,[64] as have Spanish efforts to monopolize the supply of the plant in the latter half of the eighteenth century.[65]

Although Talbor is typically mentioned in histories of cinchona,[66] the *remède anglois* episode usually receives little attention, despite the fact that it helps to explain one of the more important features of the bark's European reception.[67] Although cinchona had been well-known in Europe for decades, it was held in suspicion by physicians because its action could not be explained through traditional Galenic pharmacology, and patients who took it were believed to suffer relapses. I argue that the dissemination of a chymical model of pathology allowed for more comprehensible accounts of cinchona's therapeutic action than those previously available, a fact which helps explain the more favorable reception it found in the 1680s when Talbor "re-popularized" its use: in intellectual terms, the acid-alkali theory and the chymical critique of Galenic qualities had created a more propitious intellectual environment for the understanding of cinchona's therapeutic action. Alongside this shift in pharmacological reasoning, I also draw attention to the material processes which transformed raw cinchona bark into Talbor's *remède anglois*, in order to suggest that Talbor devised what

[64] Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge, Mass.: Harvard University Press, 2004), 38–39; James E. McClellan and François Regourd, *The Colonial Machine: French Science and Overseas Expansion in the Old Regime* (Turnhout: Brepols, 2011), 259–262.

[65] Matthew James Crawford, "Empire's Experts : The Politics of Knowledge in Spain's Royal Monopoly of Quina (1751-1808)" (Dissertation, University of California, San Diego, 2009).

[66] See for example Jarcho, *Quinine's Predecessor*, 49–50, 64–66; Maehle, *Drugs on Trial*, 237, 291n8. Jarcho provides a brief but judicious view of Talbor: he observes that Talbor "combined medical knowledge with greater pharmaceutical expertness than ordinary physicians are likely to have possessed" (48), and credits him for introducing "useful dosage forms such as the tincture" (65), but provides no additional details.

[67] The main exception is the recent work of Harold J. Cook, which I will discuss below: see Harold J. Cook, "Markets and Cultures: Medical Specifics and the Reconfiguration of the Body in Early Modern Europe," *Transactions of the Royal Historical Society* 21 (2011): 123–45.

his contemporaries believed was a more effective chymical preparation of the drug than had been previously available.

Before moving into the Talbor episode, it is useful to recall some details about the 1650s debate and cinchona's reception in European medicine. To begin, cinchona, sometimes called the "Jesuit's bark" or "Peruvian bark," was as its various names suggest a bark from a tree native to the Andean forests of South America first introduced in Europe through Jesuit channels in the 1630s. The fortunes of cinchona in learned European medical circles were deeply affected by a controversy that raged in the early 1650s. In 1652, Leopold Wilhelm, Archduke of Austria and Governor of the Spanish Netherlands, suffered from a tertian fever and was administered cinchona by an attendant physician, Jacques Chiflet. The fever disappeared for a time, but the patient suffered a relapse a month later. Chiflet then became a critic of the bark and published a short treatise against it: citing other cases of relapse, he argued that it did not cure the disease but merely extended the fever intervals. This provoked a response by the Jesuit Honoré Fabri, who defended the drug, and who was in turn systematically criticized in a treatise by the Louvain medical professor Vopiscus Fortunatus Plempius. The "criterion" by which cinchona was being assessed was Galenic on both sides of the debate, even for Fabri, who wrote in favour of the bark. This controversy set the terms of subsequent debates over cinchona: in the first place, it was deemed to be "hot," and within a traditional Galenic mindset, using a hot medication to cure a disease defined by preternatural heat seemed paradoxical; second, it was not an evacuant, as they thought a

febrifuge ought to be; and third, clinical experience demonstrated that patients who took it were prone to relapses.[68]

The suspicions voiced by Chiflet and Plempius seem to have followed cinchona wherever it went, particularly in learned circles. In the case of France, Jarcho has drawn on a number of sources to show that the bark was not popular, at least among learned physicians, either owing to this negative assessment, to difficulties in securing a supply, or to both in tandem. The letters of the Parisian physician Guy Patin—admittedly a hostile witness in the case of medical novelties—show that he closely followed the development of the 1650s polemic, and had nothing good to say about cinchona.[69] In a 1661 letter to André Falconet, he reported that the recently disgraced finance minister, Nicolas Fouquet, had taken cinchona but was not cured of his quartan fever. Patin then takes the occasion to offer his own estimation of the drug:

> As for cinchona, it makes no miracles here: when the body is well evacuated by bleeding and purgatives, it can resolve or absorb the remainder of morbific matter through its heat; in any other case, the only thing it does is heat [the body]. Even those for whom it abates the fever are not wholly cured, for the fever returns, despite their having been well purged.[70]

Patin instead preferred a simple purgative of senna, administered at the end of the fever access. But his assessment of cinchona focused on the quality of heat and its propensity toward relapses, well in keeping with the objections of Chiflet and Plempius.

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[68] Maehle, *Drugs on Trial*, 225–230.

[69] Jarcho, *Quinine's Predecessor*, 61–64.

[70] "Mais à propos de quinquina, il ne fait point ici de miracle : quand le corps est bien déchargé par la saignée et les purgatifs, il peut par sa chaleur résoudre ou absorber le reliquat de la matière morbifique; à moins que cela, il ne fait qu'échauffer. Ceux mêmes à qui il a fait cesser la fièvre n'en ont pas été tout à fait guéris, car elle est revenue, quoiqu'ils eussent été bien purgés," Guy Patin to André Falconet (21 September 1661), L. 713 in Loïc Capron, ed. C*orrespondance française de Guy Patin* (Paris: Bibliothèque interuniversitaire de santé, 2015), http://www.biusante.parisdescartes.fr/patin/ (accessed June 26, 2015).

This situation would change only with the arrival of Talbor's *remède anglois*. The story of this proprietary drug begins, as its epithet suggests, not in France, but in the marshes of Essex across the English Channel. Robert Talbor (1642-1681) apprenticed with an apothecary and even began studies at Cambridge in 1663, but appears not to have completed a degree. [71] Instead, as he himself recounts, "I planted myself in Essex near to the sea side, in a place where Agues [fevers] are the epidemical diseases" to perfect his treatment of them through "observation and experiment."[72] His sole publication, the seventy-seven page *Pyretologia* (1672), documents the results of his experiments in the Essex marshes: it includes a brief description of human physiology; a defense of his methods and sources, which stresses the importance of finding a "golden mean" between the rationality of the dogmatic sect in medicine and the experience of the empirics; an account of the cause of agues; notes on diagnosis and prognosis; a survey of existing therapies, including recipes; an account of his own (superior) method; observations on regimen; and four case histories.

Like the Louvre Capuchins, Talbor is usually characterized as an "empiric" interloper at the French court. Perhaps for this reason, no one has bothered to analyse his single publication, which clearly shows that he was influenced by Helmontian ideas.

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[71] On Talbor's biography see Mary J. Dobson, "Tabor, Sir Robert (bap. 1642, D. 1681)," *Oxford Dictionary of National Biography* (Oxford: Oxford University Press, 2004), http://www.oxforddnb.com/view/article/26910 (accessed January 5, 2016); Mary J. Dobson, "Bitter-Sweet Solutions for Malaria: Exploring Natural Remedies from the Past," *Parassitologia* 40 (1998): 69–81; Rudolph E. Siegel and F. N. L. Poynter, "Robert Talbor, Charles II, and Cinchona: A Contemporary Document," *Medical History* 6, no. 1 (1962): 82–85; Maurice Bouvet, "Talbot, vulgarisateur du quinquina en France," *Bulletin des sciences pharmacologiques* 41 (1934): 165–80.

It also bears mention here that Talbor is consistently called "Talbot" in French sources, beginning with Blégny in the seventeenth century and continuing up to Bouvet in the twentieth. In his *Pyretologia* and the royal brevet cited below, his name is consistently spelt Talbor, the spelling which I have preferred here, although Mary J. Dobson has elected to use "Tabor" in the ODNB.

[72] Robert Talbor, *Pyretologia, a Rational Account of the Cause & Cure of Agues with Their Signes Diagnostick & Prognostick. Also Some Specifick Medicines Prescribed for the Cure of All Sorts of Agues [...]* (London: R. Robinson, 1672), A4v. Ague and fever are synonymous: the former derives from the French fièvre aigu, that is, an acute fever. OED.

Indeed, Talbor first mentions Van Helmont quite early in the treatise, and he is the only medical authority explicitly cited throughout the text. The initial account Talbor provides of the spleen and the stomach as the "duumvirate" of human physiology is explicitly credited to "the ingenious Van Helmont" and the subsequent account of the action of both organs follows Helmontian terms: the spleen "ferments" the blood and produces an acidic *menstruum* for the stomach, where food is transformed into chyle.[73]

Later in the treatise, in his appendix on "Nature's Method in time of sickness," he provides a general account of chronic diseases as the product of unnatural ferments slowly "invading Nature's Castle," and uses the same language of siege in his section on acute diseases, wherein Nature is able to mobilize more quickly because she has received "timely notice of the approach." As in Van Helmont, sweating is identified as the ideal way of expelling the initial morbific matter which forms the occasional cause of disease; in so doing, the physician helps Nature, which stands in here for the archeus. On this point Talbor directly cites "that true friend of nature, the learned Helmont," even specifying the page number: "Nature being the Physicianess of diseases, she is to be strengthened, and comforted, not frightened or disquieted."[74]

Talbor's pathological description of fevers agrees with Van Helmont's in its broad strokes, most notably on identifying the spleen as the seat of agues, but it includes references to the humors and lacks the Helmontian emphasis on the "foreign guest" as the occasional cause of a fever (although, as we have already seen, his view of morbific matter literally besieging the castle of Nature resembles the archeus/"foreign guest"

[73] Ibid., 15–18.

[74] Ibid., 59. This is Talbor's own translation of "Naturam esse morborum medicatricem, eam confortandam ideo non consternandam," a passage from the "Scholarum humoristarum passiva deceptio," *Ortus medicinae* (Amsterdam: Elsevier, 1652), 802.

relation as the cause of disease). The account of fevers begins *in medias res*, after the disordered fermentation has already begun: the blood is no longer being fermented in the spleen, and sufficient acidic digestive ferment is not conveyed by the spleen to the stomach; this improper fermentation generates "viscous humours" and chyle that make their way into the blood and eventually the heart, where the flow of blood is obstructed, intermittently damming it up and releasing it. "Nature" releases the improperly fermented matter through transpiration, "till the morbifick matter come round again, continuously recruiting itself with fresh supplies from the imperfect digested chyle, till that cause be taken away," either by Nature alone or by Nature with the assistance of drugs. The periodicity of the fever depends upon the relative *lightness or heaviness* of the morbific matter (be it phlegm, bile, or black bile), and the duration of the fits depends upon the *quantity* of such matter.[75] Clots of such viscous humors were sometimes vomited as "Ague-cakes" by his patients in Essex (he diligently weighed and measured several), after which they would usually be cured of the fever.[76]

After listing a series of already known remedies for intermittent fevers, Talbor describes his own method. He begins with a "specifical Emetocathartick Powder," administered a few hours before an expected fit alongside a cordial for the stomach and spleen. But this is merely a first resort. In the case of long quotidians or quartans that do not respond to this treatment, he then administers his own "specificks," the recipes of which are, unsurprisingly, not provided.[77] The first is intended to provoke sweats and urination, the second is a "specifical splenetick medicine." At the end of this section, he then makes the surprising move of explicitly addressing the "Jesuit powder." He cautions

[75] Ibid., 20–21.
[76] Ibid., 23.
[77] Talbor does offer some hints: one is made from four vegetables, two domestic and two foreign.

that it can cause frenzies, convulsions, fits, and will only remove the fever temporarily: a relapse will occur within a fortnight. To which he adds, however, "Yet is this Powder not altogether to be condemned; for it is a noble and safe medicine, if rightly prepared and corrected, and administered by a skillful hand; otherwise as pernicious a medicine as can be taken."[78] Talbor's goal here seems to be to throw his reader off track from suspecting that cinchona was his secret: as would later be made clear, his own remedy was based on cinchona.[79]

Talbor was certainly a reader of Van Helmont: the *Pyretologia* is in broad agreement with Van Helmont in its views of the physiology of the "duumvirate," his notion of the spleen is the seat of intermittent fevers, and his views of assisting Nature by provoking sweats. He does, however, downplay the non-corporeal aspects of Van Helmont (whither the archeus?) without making the turn into the more materialist acid-alkali pathology that would be popular in 1678, when he popularized his *remède anglois* in France.

This popularization can be best followed through the eyes of Nicolas de Blégny (1652-1722), who held a royal privilege to publish an early medical journal, *Les Nouvelles découvertes sur toutes les parties de la médecine* (1679-1683), which was translated into Latin and published in Geneva for an international audience as the (curiously titled) *Zodiacus Medico-Gallicus*.[80] Although Talbor himself left behind no

[78] Talbor, *Pyretologia*, 44.

[79] On the term "specific" itself, see below. Talbor uses it repeatedly throughout the treatise without providing any clear definition. He does however link "specifics" to the "arcana" of empirics. He may be using "arcana" in the Paracelsian sense here, in which case, it is very likely synonymous with "specific." Ibid, 12-13.

[80] The main biographical source on Blégny is a 68-page medical dissertation which leaves much to be desired: Pierre Jean Tellier, *Un aventurier médical au XVIIe siècle, Nicolas de Blégny*, Thèse pour le doctorat en Médecine, Université de Paris (Paris: Librairie Louis Arnette, 1932).

writings beyond his 1672 *Pyretologia*, Blégny provides ample reporting on the drug during Talbor's period in France in the form of his *Découverte de l'admirable remède anglois*, published as a special issue of his journal.[81] Indeed, after Talbor's death, Blégny was selected by Louis XIV to publish the secret of his remedy with the commentary of the royal first physician Daquin in 1682, in the form of a special issue ("extraordinaire") of the *Nouvelles découvertes*, entitled *Le remède anglois pour la guérison des fièvres, publié par ordre du Roy*.[82] These two texts by Blégny, the 1680 *Découverte* and particularly the 1682 *Le remède anglois* (including the sections by Daquin), form the basis for my discussion.

Talbor first arrived in France in the summer of 1678 to treat the fever of *la petite Mademoiselle*, Marie-Louise d'Orléans, daughter of Monsieur (Philippe I, Duke of Orléans, the brother of Louis XIV) and Henrietta Maria of England. He was already famous in England at this point, and had been made physician-in-ordinary to Charles II in 1672 during a royal visit to Essex, and knighted in 1678. After his success with Marie-Louise, Talbor treated other important patients and when Marie-Louise married Charles

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By 1689, Blegny had become Médecin du Roi et de Monsieur, director of his Académie de Nouvelles découvertes, editor of its journal, proprietor of a Manufacture Royalle des Bandages, and was also running his own public infirmary on the rue de Pincourt. Blégny's surprising successes were definitively halted in 1693 when he was imprisoned for false usurpation of noble titles owing to his efforts to revive a defunct hospitaller order, l'Ordre du Saint-Esprit, and was also accused of heresy ("des conférences qu'il tenait clandestinement chez lui tous les vendredis d'expliquer physiquement les mystères de la Religion"), and of combining multiple medical professions. As Tellier notes, the sudden disgrace of Daquin, who had previously been his protector, likely played an important role in sealing Blégny's fate; he appears to have been imprisoned until at least 1699, after which time, he seems to have managed to flee first to Avignon then to Italy. See Tellier, *Un aventurier médical* esp. 50–58.

[81] Nicolas de Blégny, *La Découverte de l'admirable remède anglois pour la guérison des fièvres au moyen de laquelle chacun pourra se procurer la facilité de guérir à très peu de frais* (Paris: C. Blageart et L. d'Hourry, 1680); David A. Kronick, "Nicolas de Blégny, Medical Journalist," in *"Devant le deluge" and Other Essays on Early Modern Scientific Communication* (Lanham, MD: Scarecrow Press, 2004), 1–11. Reprinted from an article in the *Bulletin of the Cleveland Medical Library* (1960): 47–56.

[82] Nicolas de Blégny, *Le Remède anglois pour la guérison des fièvres, publié par ordre du Roy, avec les Observations de M. le premier médecin de Sa Majesté sur la composition, les vertus et l'usage de ce remède* (Paris: Veuve d'Antoine Padeloup, 1682).

II of Spain in 1679, he accompanied her as her physician, only to return with her to France the following year.[83]

It seems that in Talbor's absence, his former valet or *domestique*, Philippe de la Verdure, claimed to have learned Talbor's secret while in his service and began administering his own remedy at a lower rate (3 *louis d'or* per patient).[84] Although de la Verdure appears to have communicated it to Daquin,[85] Blégny reports that Talbor denied that de la Verdure knew the true secret.[86] At any rate, on September 9, 1680, a royal brevet for a 1,200 *livre* annual pension was granted to de la Verdure, "in consideration of his having renounced heresy [Protestantism] and for the services he has rendered to the public with his specific remedy against fevers," under the condition that he provide the remedy to the public and charge no more than 33 *livres* per patient.[87]

Talbor's one-time valet Philippe de la Verdure—who it should be mentioned is given the title of *médecin* in this brevet—was not the only one who sought to discover the secret of his remedy and duplicate it. Blégny's first publication on the remedy, the 1680 *Découverte de l'admirable remède anglois*, is in fact an advertisement of the fact that he too had acquired a recipe for it and had been able to confirm through a parallel chemical analysis that it was identical to Talbor's. Blégny describes how he received the recipe from an English gentleman who was an old friend of Talbor and who disclosed the recipe to Blégny out of thanks after having recourse to him during "and indisposition whose

[83] Bouvet, "Talbot, vulgarisateur du quinquina," 166–169; Dobson, "Tabor, Sir Robert."

[84] Incidentally, this is the same price that Helvétius' privilege would fix for his own "Remède spécifique."

[85] Bouvet, "Talbot, vulgarisateur du quinquina," 170. Bouvet cites this from Blégny's own medical periodical, vol. 1, p. 264.

[86] Blégny, *La Découverte de l'admirable remède anglois*, 67.

[87] "…en consideration de l'abjuration qu'il a fait de l'héresie [Protestantism] et des services qu'il a rendus au public par les remedes specifiques qu'il a pour la fièvre," AN $O^1$ 24, fol. 232r-v.

cure was rather delicate" (perhaps a venereal condition; Blégny had a reputation in this field).[88]

He even describes the pains he took to acquire a sample of Talbor's remedy in order to confirm the recipe.[89] This was especially difficult as Talbor was careful to administer it personally in order to prevent it from falling into the hands of potential imitators. As Blégny describes it, a chemical analysis (*l'analize chimique*) of the substance would likely have given him the answers he needed, but "the English physician, who understood that his success depended upon his secret, was secretive to the point that he wanted to be the only one who would administer all the doses to every patient, without trusting anyone else," and that if the patient were placed in other hands, he would only provide the remedy to another practitioner in exchange for 50 *livres*, which was a high enough cost to discourage investigators like Blégny from buying it for the purpose of such an analysis.[90] Indeed, according to Blégny, Talbor kept company only with his trusted English servants and guests (although, as we have seen, not all of these servants could be trusted!). In the end, Blégny got his hands on it by pure chance: the *valet de chambre* of an unnamed foreign prince,[91] who had taken ill with fever, called Blégny to have his blood let (recall here that he was a surgeon). Blégny did so, and discovered that the valet had been given doses of the *remède anglois* but was unwilling to take it, preferring traditional treatments instead. The valet's master, however, had recently been cured of fever by Talbor and had apparently paid for an entire course of

[88] Blégny, *La Découverte de l'admirable remède anglois*, 10.
[89] Ibid., 13–17.
[90] "Le Medecin Anglois, qui avoit compris que sa fortune dépendoit de son secret, estoit misterieux au point de vouloir donner luy-mesme toutes les prises à chaque malade, sans le confier à qui que ce soit," Ibid., 8.
[91] Bouvet 177 identifies him as the prince of Òsnabruch and the valet as one Gaillan, dit Violette.

treatment using the drug for his servant. The valet had thus decided to feign taking Talbor's remedy as a sign of respect to his master, while secretly providing his regular doses to Blégny!

Blégny himself confesses being stupefied both by his luck and by the folly of his patient, who was disregarding the reputation of the drug and its inventor, as well as the sound judgement of his own master. But Blégny knew better than to look a gift horse in the mouth:

> This was a fine occasion to profit from his quirkiness: I asked him to give me all the doses that were brought to him, and as he had no use for them, he readily consented to share them with me, and he sent them to me so regularly that every day I had material on which to perform new experiments.[92]

To compare the authentic *remède anglois* to the version he himself had produced from the recipe he had been given, Blégny undertook a series of chymical tests before an audience of his academicians (presumably members of the academic society associated to his journal), including evaporation, solvent tests of the residue, distillation and precipitation, all of which showed the two substances to be identical on the level of colour, odour, and taste.[93] Beyond these chymical tests, Blégny earlier mentions successful clinical trials of his version on the poor as well, apparently before he had the basis for a chymical comparison, but that he apparently did not consider the clinical results to be sufficient to allow him to claim he had duplicated the drug.[94]

Blégny shows discretion and does not publish the secret in full, observing that to do so would "damage the art of medicine" because secrets revealed soon fall into disdain

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[92] "Ce fut une belle occasion pour profiter de sa bizarrerie: Je le priay de me donner toutes les prises qu'on luy apporteroit, et comme il ne le destinoit à aucun usage, il consentit sans peine à m'en faire part, et il me l'envoya si exactement, que j'avois chaque jour de quoy en faire de nouvelles experiences," Blégny, *La Découverte de l'admirable remède anglois*, 15.

[93] Ibid., 16–17.

[94] Ibid., 12.

among the public, and that this would run counter to the king's wishes and to his mandate as editor of his medical journal.[95] He goes so far as to say that the basis of the drug is indeed cinchona, which everyone appears to have known already, and which merely offered a starting point as it was Talbor's preparation which was the real key. The full disclosure of the secret would have to wait until after Talbor's death in 1682; in the meantime, Blégny simply advertises that he knows the secret and that patients may now come to him for it as well.[96]

To quickly summarise the rest of Talbor's career, he returned to Paris from Spain in 1680, and had a number of successes in treating fevers, most notably with the Dauphin in November 1680. During this period he acquired two substantial pensions for curing the Dauphin and Dauphine, several *gratifications*, and was naturalized in France. His secret had been purchased by the king and was to be published upon his death. Drawing on contemporary letters, Bouvet has shown that Talbor's reputation appears to have fallen off in 1681 however: many who had been cured using his febrifuge seemed to be relapsing. By September, Talbor had left Paris to return to England, died shortly thereafter (although he was only about 40 years old), and was buried on 17 November 1681, with his monument bearing the epitaph "Febrium malleus," the hammer of fevers.[97]

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[95] "La grace qu'il a plû au Roy de me faire, en me préposant pour la recherché des choses utiles à la santé des hommes [*that is, in giving him the privilege for his medical journal*], m'engage à travailler sans cesse pour le bien du public; et je manquerois à ce que je dois à cet égard, si je divulgeois un remede qui ne luy peut estre utile sans estre secret," Ibid., 19.

[96] Bouvet also adds that Blégny advertised his *Découverte* with 8,000 *affiches*, an indication perhaps of the value at this point of having duplicated Talbor's remedy. Bouvet cites BN 8- TE46- 21, with no page number; as far as I can tell this is simply another copy of the *Découverte* which I examined at the BIUS and from which I cite here.

[97] Bouvet, "Talbot, vulgarisateur du quinquina," 174–176; Madame de Sévigné, *Correspondance*, 3:56. Concerning the episode with the Dauphin, Madame de Sévigné observed the following in a letter to her daughter: "L'Anglois a promis au Roi, sur sa tête, et si positivement, de guérir Monseigneur dans

Talbor's *Pyretologia* reveals that, like the Louvre Capuchins, he was conversant in the chymical discourse of the time. His phenomenal success with his remedy, and the subsequent re-emergence of cinchona as a subject of learned medical speculation, rested on two foundations. First, Talbor personally devised a new preparation of cinchona that was considerably different from the common one then available and widely perceived to be more effective. Second, in the decades since the Chiflet-Fabri-Plempius polemic, a new more propitious chymical-theoretical framework had emerged for understanding cinchona's therapeutic action. These factors neatly exemplify the dialectic between economic ambitions and a new intellectual climate which, along with the ingenuity of would-be counterfeiters like Blégny, would bring cinchona back to the center of medical attention in the 1680s.

*3.1 Responses to marketplace secrecy: pharmaceutical reverse-engineering*

Talbor's success in France provoked a sudden renewal of interest in cinchona. Motivated by a combination of intellectual curiosity and economic interest, other practitioners, it seems, wanted to reverse-engineer the secret of his preparation. In addition to de la Verdure and Blégny, we know that the former army apothecary Henri de Rouvière was producing a competing drug,[98] and Bouvet has also shown that the Abbé Bourdelot (1610-1685), the central figure of one of the pre-Académie scientific circles, expressed a keen interest in discovering the secret in these same years.[99] This sudden renewal of interest is also confirmed by Blégny in his full, royally-mandated disclosure of Talbor's secret, *Le Remède anglois [...] publié par ordre du Roy*, published 15 January

quatre jours, et de la fièvre, et du dévoiement, que s'il n'y réussit, je crois qu'on le jettera par les fenêtres," suggesting that even at this stage Talbor's reputation was precarious (November 8, 1680).

[98] Bouvet, "Talbot, vulgarisateur du quinquina," 174. Bouvet cites Blégny's journal for 7 September 1680.

[99] Ibid., 170.

1682 as an "extraordinaire" of his *Nouvelles découvertes*. With Talbor dead and buried, the secret of his preparation could be revealed. Blégny's preface praises Louis XIV for having Daquin order him to publish the secret, observing that a more selfish monarch may have reserved its enjoyment for his own royal family. Blégny opens with a natural and economic history of the drug, and the remainder of the text toggles back and forth between excerpts from Talbor's preparation and Daquin's instructions on how to administer it. Both authors explain the action of the drug through reference to the acid-alkali theory.

Blégny affirms that the ground bark which forms the basis of the *remède anglois* is from Peru and was first brought back to Europe by the Jesuits. He also provides a list of authorities who have written on it, from Chifflet in 1653 to the anonymous author (François Monginot) of the short treatise entitled *De la guérison des fièvres par le quinquina* (1679), and finally the fourth edition of Lémery's *Cours de chymie* (1681). After explaining that there are two species of cinchona, one of which is of little use, Blégny explains how to identify the right one. This leads him into a discussion of how the bark is sometimes adulterated by merchants, and from here his natural history of cinchona transfers seamlessly into an economic history of the dramatic fluctuations in the price of cinchona bark since the popularization of Talbor's remedy.

Indeed, according to Blégny, Talbor's remedy caused substantial fluctuations in the price of cinchona. When only the Jesuits possessed it, presumably in the 1650s, he tells us that it sold at the high price of one *écu* (=3 *livres*) per dose of two drachms.[100] On the eve of Talbor's introduction of his remedy, the value of a pound of cinchona had diminished to between 22 and 25 *francs* (synonymous with *livres*):

[100] Presumably the *écu d'argent* of 3 *livres*.

> As soon as the *remède Anglois* was in vogue, men on all sides began to experiment on cinchona, which greatly increased the price, but these experiments alone were not what brought up the price: Talbot, seeing that they were preparing febrifuges which came very close to his, and worrying that in the end someone would discover it, resolved to remove all the cinchona he could find in Paris, and in the other principal cities of France, and even England. As the execution of this design made some noise, a number of physicians, surgeons, and apothecaries hastened to furnish themselves with cinchona.[101]

In effect Blégny describes a scenario in which the *remède anglois* created an initial spike in demand for cinchona, which made it scarce. If we take him at his word, this spike was not due to apothecaries or others using it to compound and sell known cinchona preparations: rather, his implication seems to be that people were buying it for "essais," presumably in an effort to replicate the *remède anglois*. Alarmed by these "essais," which were coming close to replicating his own remedy, Talbor then committed his resources (which were by this time probably considerable) to purchasing as much of the cinchona supply as he could get his hands on, to forestall ingenious competitors (presumably the likes of his former valet de la Verdure and Blégny himself). The unsurprising result, again according to Blégny, was that the price of cinchona skyrocketed. French merchants began buying it up all the way back to its sources in the ports of Rouen and Bordeaux, where there was still a good quantity to be had. At the height of the bubble, the famous Parisian apothecaries Andry and Villain were selling it at no less than two hundred *francs* per pound, an 800% increase in price from the period immediately prior to Talbor's

[101] "Mais à peine le Remede Anglois commança-t'il à estre en vogue, qu'on fit de tous les costez des essais sur le Quinquina, qui en augmenterent de beaucoup la chereté : ces essais neanmoins ne furent pas ce qui le porta à un plus haut prix. Le sieur Talbot voyant qu'on preparoit des Febrifuges fort approchant du sien, et craignant qu'à le fin quelqu'un ne le découvrist, prit resolution de faire enlever tout ce qu'il pouroit trouver de Quinquina à Paris, et dans les autres principales Villes de France, et mesme d'Angleterre. Comme l'execution de ce dessein fit quelque bruit, plusieurs Medecins, Chirurgiens et Apothiquaires, crurent devoir faire leurs diligences pour s'en fournir," Blégny, *Le Remède anglois*, 25.

introduction of the *remède anglois*. after which, Blégny tells us, "fifteen days went by in which we could not find any, neither with them, nor with any other druggists."[102]

A trickle of cinchona finally began to arrive in Paris at the end of this period, and was sold at one hundred *écus* per pound. Since that time, Blégny concludes, the price has dropped steadily as Talbor's remedy fell out of fashion and as merchants secured new supplies of the bark from Spain and Portugal. At the time of his writing, Blégny says that the price has dropped to between fifty and sixty francs per pound, and that he expected it to continue dropping: "I have no doubt that in a short time some fleet shall arrive from the Indies, and make it even cheaper."[103]

My suggestion here is that the race to uncover the secret of Talbor's success provided a great stimulus to further investigations of cinchona. To the anecdotal data on various imitators and interested parties, we can add Blégny's account of experimenters buying up cinchona to discover Talbor's secret, and the flurry of publications on cinchona in France during the five years following Talbor's arrival (1679-1684). To name just a few, there are multiple editions of Blégny's works on cinchona (the 1680 *Découverte*, the 1681 *Connoissance certaine*, several editions of the *remède anglois*, first published in 1682 and later reissued under several titles); two editions of a work by Jacob Spon responding to Blégny;[104] the work of François Monginot (which went through at least three editions between 1679 and 1686);[105] the work of Jacques Minot (which went

[102] "Il se passa plus de quinze jours sans qu'on en pût trouver, ny chez eux, ny chez aucun de nos Droguistes," Ibid., 26.

[103] "Je ne doute pas que dans peu quelque flotte arrivée des Indes, ne le rendent encore à beaucoup meilleur marché," Ibid., 27.

[104] Jacob Spon, *Observations sur les fievres et les febrifuges, a l'occasion du livre intitulé, La decouverte de l'admirable remede anglois* (Lyon: s.n., 1681).

[105] François de Monginot, *Traité de la guérison des fièvres par le quinquina* (Lyon: Guillaume Barbier, 1679).

through four editions between 1684 and 1710);[106] the accounts of cinchona in various entries of Lémery's *Cours de chymie*; and shorter works by Helvétius on therapeutics, including the enema delivery method he devised (1684).[107]

These considerations raise questions about the relationship between Talbor's remedy, medical interest in testing and analyzing cinchona, and the European supply-and-demand for the bark as a commodity. Historians of medicine over the past two decades have given considerable attention to the medical marketplace, but have typically positioned their work as a social historical alternative to a more traditional intellectual history. The quest to unlock the secret of Talbor's *remède anglois* demonstrates the interest of considering the dialectical relationship between economic factors on the one hand and medical-intellectual discourse on the other. Harold J. Cook has recently drawn on the case of Talbor and cinchona specifically to suggest that economic and intellectual transformations are often intimately linked. Indeed, Cook has suggested that the proliferation and commodification of medicinal specifics may be at the root of two other trends often observed in this period, namely the move toward more ontological conceptions of disease on the one hand and a growing de-individualization of human bodies on the other.[108]

Leaving aside the broader implications of Cook's argument for the time being, in the third part of this section (3.3) I will explore the intellectual side of this transformation. In the case of Talbor's *remède anglois*, this entails a close examination of

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[106] Jacques Minot, *De la nature et des causes de la fievre, avec quelques experiences sur le quinquina, et des reflexions sur l'action de ce remede* (Paris: Robert Pepie, 1684).

[107] Jean-Adrien Helvétius, *Methode pour guerir toute sorte de fievres : sans rien faire prendre par la bouche.* (Paris: veuve de Nicolas Oudot, 1684).

[108] Harold J. Cook, "Markets and Cultures: Medical Specifics and the Reconfiguration of the Body in Early Modern Europe," *Transactions of the Royal Historical Society* 21 (2011): 123–45.

the new climate fostered by the chymical pathology of the acid-alkali theory, whose bearing on the history of cinchona has so far escaped scholarly treatment. In the following section (3.2) I highlight a hitherto ignored aspect of the story, namely, Talbor's own practical ingenuity in developing his new preparation for cinchona.

*3.2 The secret of Talbor's preparation*

The new chymical preparation of cinchona which Talbor devised is crucial to understanding how his remedy was able to rescue cinchona from obscurity and put it back at the forefront of medical discussion in France. Talbor's recipe, as exposed by Blégny's 1682 *Le Remède anglois*, can be usefully compared to the so-called "Schedula romana," the principal cinchona recipe available at the time. The "Schedula" is a short, page-long set of instructions for preparing and administering the bark, likely based on the practices of Jesuit apothecaries in Rome around 1650. It was probably the most common preparation in the decades following cinchona's introduction into Europe, and as such it provides a useful barometer for assessing Talbor's preparation.[109]

Just how innovative was Talbor's cinchona preparation? Blégny begins by observing that the preparation of the *remède anglois* is relatively simple, contrary to the expectations of many of those who sought to duplicate it using too many different substances.[110] A comparison to the "Schedula," however, immediately reveals that Talbor's recipe was considerably more complex than the main cinchona recipe then in circulation. According to the "Schedula," two drachms of "finely ground and sieved bark" should be placed in a *cyathus* (45ml) of strong white wine for three hours before

[109] On the "Schedula Romana" see Jarcho, *Quinine's Predecessor*, 262–269.

[110] Blégny, *Le Remède anglois*, 48. Talbor's own preparation instructions on preparation covers 51-107, interspersed with comments by Daquin on administration, almost page for page.

the next episode of fever is expected. Compare these simple instructions to Talbor's preparation. First, pulverize a *livre* (480g) of cinchona, sieve it, soak in a decoction of anise and parsley juice (*suc de persil*), then put it into a 15-pint (14.25l) stoneware jug (*cruche de grais/grès*), filling it with red wine. Then cork it, put it in a dry place away from fire for eight days, stirring two or three times daily, being careful to reach the bottom in so doing. After which, you filter it through cheese cloth into glass bottles, cork it, and store it in a dry still place, where its virtues will be preserved for 2-3 months.[111]

Already at this early stage in Talbor's preparation there are a number of pertinent differences between it and the "Schedula." These include: the pre-soaking of the cinchona in the anise-parsley decoction; the variety of wine (white vs. red); the ratio of cinchona to wine (the "Schedula" has 0.15g of cinchona per 1ml of wine while Talbor has 0.03g/1ml); the substantial difference in amount of time that the cinchona powder is left to soak in the wine (3 hours vs. 8 days); and the importance of regularly stirring the solution. It should also be noted that Talbor did not administer uniform doses throughout the course of his treatment: he used a staged preparation model that slowly ramped down the concentration of cinchona. For his second infusion he would take the residue of the first infusion, mix it with a new half *livre* of cinchona, place it in a jug of the same wine, this time for 10 days instead of eight; and for his third infusion, he would take the residue of the second infusion and mix it with wine in the jug, this time without adding any new cinchona.[112]

We have less information on Talbor's own technique in administering these infusions, and Daquin observes in his commentary that Talbor himself did not always

[111] Ibid., 51–53.
[112] Ibid., 56–57.

follow his own protocols. He specifies that 5-6 *onces* (1/2 *septier*, approximately 238ml) of the full-concentration first infusion of cinchona wine should be given for adult patients, at the end of a fever period, not at the outset, as in the "Schedula." The same dose should then be taken every third hour until the next attack of the fever, except in sleeping hours (sleep should never be interrupted). After the next attack or "access" concludes, the patient should continue taking a full dose of the first infusion every third hour until the fever misses one of its regular attacks, after which the periodicity of doses can be reduced to once with breakfast and once with supper rather than every third hour. This regimen, using the first infusion, should be followed for 5-6 days; after which, the patient should move on to the less concentrated second infusion, taking it once daily in the morning for eight days, and then to the third and weakest infusion, to be taken every second day for fifteen days. Daquin also stresses the paramount importance of not following a dose of the remedy with a purge or bloodletting, and that such "remèdes ordinaires" are only necessary in certain cases. Generally, the "specific" is most effective when taken alone.[113] In this particular instruction—which would be taken up by Fagon a decade and a half later—we see the move from using general therapies to rectify a humoral imbalance (*dyscrasia*) toward a view of the remedy as a "specific" that suppresses the causative ferment of the disease.

The "Schedula" by contrast prescribes a much simpler regimen. When an episode of fever begins (ascertained by the patient's shuddering) the patient should drink the whole cinchona-wine infusion. Beyond this it offers few instructions: the administration can be preceded by a purge, but no medications should be taken for several days afterward. No instructions are provided in the original "Schedula" on additional doses.

[113] Ibid., 74.

In sum, there are a number of important differences between the recipes for the "Schedula" and Talbor's *remède anglois*. Talbor was using five times less cinchona per volume of wine, but was letting it steep for much longer, and regularly stirring it to ensure that the virtues of the bark were extracted by the wine. In his administration, Talbor was also careful to keep the patient taking regular doses every three hours for 5-6 days, long after the fever stopped making its regular accesses, and then continued on with diminishing concentrations and less-frequent dosage periods for another three weeks.[114] As such, Talbor's *remède anglois* was much more than a case of a streetwise charlatan repackaging an "already well-known" drug and making it big at court, as Stanis Perez has suggested.[115] Perez is of course right to point to Talbor's remedy as an intriguing episode in the history of pharmaceutical consumption, and to underline the role of royal bodies as powerful arbitrators in pharmaceutical debate.[116] But to say cinchona had "already been discovered" is an oversimplification, and misses the crucial importance of Talbor's innovations. His preparation and protracted course of treatment represent a substantial departure, and his contemporaries, who were well aware of cinchona and concluded that

[114] It is of course impossible to make categorical statements about, for example, just how much of what we today identify as the active alkaloid in cinchona, quinine, was present in these different preparations. We do not know, for example, specifically what cinchona bark Talbor and others were receiving and where it came from (in some cases, as we shall later see, vendors sold "false" cinchona bark; see also Maehle, *Drugs on Trial*, 229 on confusion with Peruvian Balsam tree bark), what effects the conditions and duration of transportation might have had, etc. These limitations granted, a laboratory test for the relative extraction of quinine following the two recipes might still be interesting, but is beyond the scope of my dissertation, not to mention the fact that I have no skills or training in organic chemistry.

[115] Stanis Perez, "Louis XIV et le quinquina," *Vesalius* 9, no. 2 (2003): 25–30. "On constate que la 'querelle du quinquina,' si l'expression n'est pas exagérée, concerne essentiellement des courtisans ambitieux, souhaitant avoir la primeur d'une découverte déjà ancienne! Si nouveauté il y a, elle consiste sur tout dans l'ampleur de sa diffusion à la Cour : elle atteint le roi en personne" (26).

[116] Perez casts Louis XIV's usage of cinchona in the same light as the famous 1658 cure of Louis XIV through the *vin émétique*, which vastly increased the prestige of antimonials and paved the way to the revocation of the Parlement's ban: in both cases, he argues, the king's own consumption solves disputes over therapeutic substances. The problem here is that the king did not use cinchona until 1686, long after Talbor was dead. The argument could however be extended to "royal" or "courtly" bodies more generally, such as that of the Dauphine, but this raises the chicken-or-the-egg question: did Talbor's success in the Paris market follow from his success at court, or vice versa? And what of his earlier successes in England? A simple emulation model for consumer behaviour seems insufficient to explain Talbor's success.

it must be the primary ingredient in his secret remedy, nonetheless recognized the greater efficacy of Talbor's specific preparation and, as we have already seen, endeavoured to replicate it.

*3.3 The court physicians Blégny and Daquin on the action of cinchona*

The material transformation of cinchona embodied by Talbor's preparation was followed in its wake by an intellectual shift in pharmacological reasoning surrounding the drug. The comments of Blégny and Daquin are best understood within the broader history of "fermentationist" accounts of fever and of the acid-alkali theory of pathology. It should be recalled once again that *Le remède anglois* includes different sections written by Daquin and Blégny, respectively: although both share a common chymical vocabulary, in this section I will be careful to note some of their more subtle points of disagreement.

As Lopiccoli has pointed out, Blégny's basic definition of fever is in accord with that of the English chymical physician Thomas Willis (1621-1675): "Fever is a fermentation of the blood; fermentation is a disordered movement of insensible parts."[117] This already stands starkly against the Galenic definition of fever as preternatural heat. Blégny and Willis also agree that bitter (*amère*, *amarus*) substances should be used

[117] "La fièvre est une fermentation du sang, la fermentation est un mouvement dereglé des parties insensibles (*motus intestinus partium insensibilium*)," Blégny, *Le Remède anglois*, 109–110; Thomas Willis, *Diatribae duae medico-philosopicae quarum prior agit de fermentatione sive de motu intestino particularum in quovis corpore, altera de febribus, sive de motu earundem in sangine animalium*, 3rd ed. (London: J. Martin, 1662), 17, 117.

The exact phrase used by Blégny does not appear in Willis, but seems instead to be a mixture of two different definitions, one for fermentation and the other for intermittent fevers: the first, "Fermentatio est motus intestinus particularum, seu principiorum cuiusvis corporis, cum tendentia ad perfectionem eiusdem corporis, vel propter mutationem in aliud" (17); and the second (for fevers): "Quae de febri ex vi vocis et etymologia vulgo prosant notiones, hic consulto ommittam: describi potest in hunc modum, quod sit motus inordinatus sanguinis, eiusque nimia effervescentia, cum calore, et siti, aliisque praeterea symptomatis, quibus oeconomia naturalis varie perturbatur" (117). This passage is also the source for Willis's subtitle. See also Bayle on Sylvius; fermentation may be defined this way by him as well.

against such fermentation, and that cinchona is the best of a class of such substances, having virtues which are peculiar to it.[118]

But where then did Willis's notion of fermentation come from? The most obvious answer is that he devised it by analogy to alcoholic fermentation. Fermentation of wine and beer is consistently referred to by Willis from the preface of *De febribus* onward, but so too are the production of cheese and butter, as well as the rising of bread.[119] Willis himself acknowledges the link to these crafts, pointing out that he initially intended to write a treatise on the use of fermentation in the arts of baking and brewing, but quickly realized the subject was much broader, and extended from the works of art to the works of nature. In his view, natural fermentation was not just *similar* to artificial fermentation, but the two are one and the same.[120]

The use of tiny quantities of yeast (or rennet in the case of cheese) to produce widespread changes in bread, grape must, barley wort, and milk provides the central analogy through which tiny quantities of "febrile leaven" could be understood as producing a much larger quantity of acidic matter through fermentation. Such everyday analogies were also used in transmutational alchemy to explain how a tiny piece of the Philosophers' Stone could transform thousands of times its weight of lead into gold.[121] It

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[118] Blégny, *Le Remède anglois*, 28–29; Willis, *Diatribae duae*, 156. The other substances are gentian, centaurea, contrayerva, dragonword (*serpentaire*), absinth and chervil (*cerfeuil*) leaves, scammony. This passage is taken almost word for word from the corresponding statement in Willis, which mentions the same plant and ascribes the quality of bitterness to all of them. Interestingly, Willis also calls them *alexipharmaca*, meaning antidotes.

[119] Willis, *Diatribae duae*, 1–4, 82–83, 90. See Ch. 1 (1-4) for reference to wine, beer, and bread; Ch. 11 (82-83) and Ch. 12 (90) for cheese and butter.

[120] Ibid., A6. "Disquisitionem istam aggressus me ad pistrinam detrusum, et solummodo ad panificum et cervisiariorum furnos relegatum esse putaram; nec ultra istos limites, nisi sortè raptim, aut petita prius venia procedere licere : postquam vero rem penitus intueri coeperam, provinciam longè amplissimam nactus videbar; quippe praester isthaec Artis, plurima naturae opera, effectus fermentationi non modo similes sed ipsosmet fuisse planè constabat."

[121] Lawrence M. Principe, *The Secrets of Alchemy* (Chicago: University of Chicago Press, 2013), 125–126.

was from this alchemical lineage that Van Helmont built his own notion of fermentation, of which Willis was certainly aware, and which was closely linked to metallic transmutation.[122] For him, the ferment was an immaterial force capable of impregnating a given object and altering the matter which constitutes it in order to make it more similar to itself.[123] The ferment is thus the agent of the "odor" which carries the seminal idea of a given being (its blueprint, to use Pagel's analogy): the ferment renders matter receptive to the idea, re-arranging it in accordance with the "plan" of the seminal idea. In the genesis of living things, the ferment then assumes the position of archeus.[124] The notion of the archeus is of course absent in Willis as well as Blégny and Daquin, but as we shall see, other elements remain, especially in the notion of a febrile *levain* endowed with a power to "transmute" normal food into dangerous acids.

Moving from the image of disease as disordered fermentation to that of cure as neutralization, Blégny's use of a bitter (alkali) therapeutic substance against a sharp (acid) disease has obvious resonances with the then-current acid-alkali pathology associated with Sylvius, Tachenius, and others. But following Willis's lead in the *Diatribae duae*, Blégny is reluctant to openly join a particular medical-philosophical camp, including that of the acid-alkali theory (in spite of its numerous affinities with his own views), ostensibly wanting to avoid the trap of speculating on causes without first having sufficient grasp of the phenomena. After explaining that "bitterness" can suppress (*supprime*) unnatural acidic fermentations, and after brushing aside the Galenic physicians who content themselves with saying that cinchona is hot and dry at the beginning of the second degree, Blégny directly condemns those who have "introduced

[122] Willis refers directly (if not favourably) to Van Helmont in ch. 9 of the *Diatribae duae*.
[123] Pagel, *Joan Baptista van Helmont*, 79–87.
[124] Ibid., 71–74.

bad principles (*méchans principes*) into the "New Philosophy," by simply making cinchona an alkali that "arrests" the movement of the fever, here identified as acidic.[125] As Blégny later clarifies, this is a response to the view of the apothecary Nicolas Lémery,[126] recently expressed in the fourth edition of his popular chymical textbook, the *Cours de chymie* (1681):

> It seems that cinchona arrests and suspends the humor of the fever in more or less the same way as an alkali arrests the movement of an acid salt, that is to say it holds it and makes a sort of coagulum; this humor remains dormant for fifteen days and the patient feels a bit bloated and heavy, especially when he has not been sufficiently purged: and then the fever returns because the humor, having been agitated by the corporeal spirits or having joined with other humors of the same nature that had been made in the fifteen days, rids itself of the cinchona and begins fermenting just as it had done beforehand.[127]

Although this passage is quoted nearly verbatim by Blégny,[128] referring to Lémery by name, his tune on Lémery's acid-alkali pathology more generally is less condemnatory.[129] Blégny observes that "In his new *Cours de chymie*, M. Lémery is not so far from the truth,"[130] but believes that Lémery goes wrong when he believes the cinchona merely envelops the febrile acidity in a temporary "coagulum." Blégny argues

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[125] "Quelques autres du nombre de ceux qui ont introduit de méchans principes dans la nouvelle Philosophie, ont crû mieux dire en avançant que le Quinquina comme un alkali arreste le movement de l'acide qui fait la fièvre; mais c'est vouloir expliquer une chose obscure par d'autres qui le sont encore d'avantage," Blégny, *Le Remède anglois*, 27–28.

[126] On Lémery see esp. Michel Bougard, *La Chimie de Nicolas Lemery* (Turnhout: Brepols, 1999).

[127] "II y a apparence que le Kina Kina arreste et suspend l'humeur de la fièvre à peu prés comme un Alkali arreste le mouvement d'un sel acide, c'est a dire qu'il la tient liée et qu'il en fait une espece de coagulum; cette humeur demeure ordinairement pendant quinze jours en repos et le malade se sent un peu gonflé et pesant, principalement quand il n a pas esté assés purgé: ensuite la fièvre revient parce que l'humeur ayant esté agitée par les esprits du corps, où s'estant jointe à d'autres humeurs de la mème nature qui se font faites pendant les quinze jours, elle s'est débarassée du Quinquina et elle fermente comme auparavant," Nicolas Lémery, *Cours de chymie*, 4th ed. (Paris: Chez l'auteur, 1681), 582–583.

[128] "Le Quinquina fixe et coagula l'humeur de la fièvre, à peu près comme un alkali arreste le mouvement d'un sel acide," Blégny, *Le Remède anglois*, 44.

[129] On Lémery's permutation of the acid-alkali theory, see esp. Lawrence M. Principe, "A Revolution Nobody Noticed? Changes in Early Eighteenth-Century Chymistry," in *New Narratives in Eighteenth-Century Chemistry*, ed. Lawrence M. Principe (Dordrecht: Springer, 2007), 4–5; John C. Powers, "Ars Sine Arte: Nicholas Lemery and the End of Alchemy in Eighteenth-Century France," *Ambix* 45, no. 3 (1998): 515.

[130] "M. Lemery dans son nouveau Cours de Chimie, ne s'est pas tant éloigné de la verité," Blégny, *Le Remède anglois*, 44.

instead that the principles of the cinchona travel throughout the body and reunite the proper parts (*propres parties*) of the blood, separating them from the febrile matter, which, rather than being trapped in a coagulum, is instead expelled insensibly through transpiration or urine.[131]

Blégny responds in a similar way to the work of François de Monginot, the anonymous author of the 1679 *Traité de la guérison des fièvres par le quinquina*, which, along with Willis and Lémery, is one of the key sources for his reflections on fever and cinchona:

> The author of *La guérison des fièvres par le quinquina*, who makes the cause of the fever consist of a certain acid leaven (*levain*), associates the effects of this medicine to the faculty it has to combat, mortify, and resolve this venom; but this author has not taken care, for if in fact the cinchona was capable of destroying or even expelling the acids in the blood, it could not be taken without entirely perverting this liquid, because it would blunt or chase away even the natural acids which are part of the blood.[132]

Here again the key is cinchona's capacity to separate the good from the bad in blood, the normal acid corpuscules from the pathological febrile matter. In spite of his initial condemnation of "méchans principes" introduced into the New Philosophy, we can see that Blégny's own contributions are more of the order of modifications and qualifiers to those of the more explicit versions of the acid-alkali theory as applied to fever pathology. Although he occasionally slips into referring to the cause of the fever as an acid,[133] Blégny generally uses qualitative adjectives "aigre" (sharp) and "amère" (bitter) and their

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[131] Ibid., 45.

[132] "L'Auteur de la guérison des Fièvres par le Quinquina, qui fait consister la cause de la fièvre dans un certain levain acide, raporte les effets de ce medicament à la faculté qu'il a de combattre, de mortifier, et de resoudre ce venin; mais cet Autheur n'a pas pris garde, que si effectivement le Quinquina estoit capable de détruire ou mesme de pousser dehors les acides qui sont dans le sang, il ne pourroit estre pris sans pervertir entierement ce liqueur, puis qu'il amortiroit ou chasseroit les acides mesmes qui naturellement en font partie," Ibid., 42–43.

[133] Ibid., 121.

nominalized versions like “aigreur” (sharp) and “amertume” (bitterness), instead of referring directly to acids and alkalis.[134]

This semantic variance can perhaps be attributed to Blégny’s avowed cautiousness regarding premature speculation about the action of cinchona and his avowed desire stick to experience and the observed phenomena. He favourably cites Willis’s similar attitude to this effect on two occasions,[135] although he is sufficiently adventurous to supply corpuscular imagery by describing the different shapes of the particles.[136]

Although Daquin and Blégny agree on the basic definition of fever as an excessive fermentation of the blood, Daquin’s sections of *Le remède anglois* have important lexical distinctions which point to important differences in emphasis between his and Blégny’s accounts both of fever pathology and of the action of cinchona.[137] The first of these differences is Daquin’s repeated usage of the term *levain* and, on one occasion, *fermens*. While Blégny reports the use of this term by others (e.g. Monginot), he only uses it himself in one of his own explanations on one occasion, usually preferring the process-noun, fermentation.[138] As such, in Daquin’s account the ferment or *levain* emerges more as a causative agent, literally the catalyst of the process of fermentation, a materialist version of Van Helmont’s disease *semina*. Blégny by contrast describes

[134] Could this be related to the taste-assaying described by Ragland, and usually justified through reference to the Hippocratic *De vetere medicina*?

[135] Blégny, *Le Remède anglois*, 28, 38.

[136] On this imagery see Lopiccoli, “L’uso terapeutico della chinachina.”

[137] Blégny, *Le Remède anglois*, 73–105. Daquin’s main observations on the action of cinchona appear under two subheadings, “Autres observations tirées des Memoires de Monsieur le premier Medecin du Roy” (75-87) and “Remarques tirées de Memoires de Monsieur le premier Medecin du Roy, touchant la pratique du sieur Talbot, dans la preparation et dans la distirbution de son Remede” (88-105). Daquin published very little, and these two sections may, along with his observations in the royal *Journal de santé*, be his principal surviving writings.

[138] Ibid., 117.

fermentation as a process rather than as the action of an entity. The second difference is Daquin's insistence on referring to Talbor's remedy and cinchona more broadly as a specific (*spécifique*) and sometimes specific febrifuge. This term is wholly absent from Blégny's sections of the text.

After praising the new preparation of Talbor in restoring what had been a "drogue méprisable,"[139] Daquin begins somewhat paradoxically by insisting that while the specific is most effective against intermittent fevers (quotidians, tertians, double tertians, quartans, double and triple quartans), continuous fevers can also be treated with it.[140] Febrile matter (*la matière des fièvres*) is spread through the whole mass of the blood, and it is important to first expel heterogeneous and impure matter with bloodletting and evacuations of the stomach, to clear the way for the specific to act. In spite of his traditional insistence upon a preliminary evacuation, the rest of Daquin's explanation of fever "pathogenesis" and the therapeutic action of the specific is quite novel. The primitive cause (*cause primitive*) of a fever lies in irregular movements in the blood, but these would quickly be rectified by nature, if not for the fact that they are also maintained by a more permanent cause:

> In unsettling the whole animal economy, *these irregular movements corrupt the leavens that serve the digestion*, and in so doing render the chyle impure and ill-formed. We can regard this depraved chylification as the immediate and antecedent cause of fevers, such that a remedy cannot truly be a febrifuge

[139] Interestingly, Daquin here attributes the preparation, whether he came across it by invention or discovered it by chance (*hazard*),to Talbor's audacity (*hardiesse*), a trait that would have passed as a "temerité punissable dans un autre qu'un Empiric." Throughout, any praise Daquin has for Talbor is qualified by calculated jabs like this one. See also 94-95, on the failure of empirics like Talbor to determine if the fever of a given patient is a cause or merely an effect of another disease; and 97-96, on Talbor not always following his own recipe.

[140] This represents a disagreement with Blégny's opinions: he believes the remedy is effective against both intermittent and continuous fevers.

> unless it entirely rectifies the bad disposition of the stomach and that of the leavens, and this is what the English febrifuge neatly does.[141]

Corrupt digestive *levains*, through a process of "depraved chylification," are what continuously renew and spread the fever, then, and the function of a true febrifuge is to rectify them.

Daquin uses the same vocabulary later in the treatise, after stressing the importance of infusing the wine with cinchona for a sufficient period of time, lest it not place all of its bitterness (*amertume*) and virtue in the wine. Talbor, he writes, did not always properly prepare h

is own febrifuge, and he sometimes administered it at different points during a fever when it should, in fact, be used only after a fever access, lest it interfere with the body's natural ability to heal itself:

> Properly speaking, this indisposition is a kind of crisis, which nature excites in order to remove raw, impure, or superfluous matter from the vessels. Consequently, this crisis should not be suppressed prematurely, lest the leavens remain in the hearths (*foyers*), subsisting with all their force, which gives rise to the inopportune relapses which were the first cause of the contempt in which cinchona was held, despite being a quite excellent febrifuge.[142]

Cinchona needs to be used in conjunction with the body's natural healing faculties, and should not interrupt them, lest some *levains* survive within the "hearths" or "kitchens"

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[141] "…en déreglant tout l'œconomie naturelle, ils [les mouvements irréguliers] *corrompent les levains qui servent à la digestion*, et par ce moyen rendent le chyle impur et mal conformé; on peut regarder la chylification dépravé comme la cause immediate et antecedante des fièvres; de sorte qu'un remède ne peut estre veritablement fébrifuge, s'il ne rectifie tout ensemble la mauvaise disposition de l'estomach et celle des levains dont je viens de parler, et c'est proprement ce que fait le fébrifuge Anglois." Blégny, *Le Remède anglois*, 83. Emphasis added.

[142] "*…cette indisposition n'estant a proprement parler, qu'une maniere de crise que la nature excite* pour deposer hors des vaisseaux, des matières cruës, impures, ou superfluës, laquelle par consequent *ne peut estre supprimée prematurement, sans que les levains demeurent dans les foyers,* et subsistent dans toute leur force, *ce qui a donné lieu à ces recheutes importunes, qui ont esté les premieres causes du mépris qu'on a fait du Quinquina*, qui ne laisse pas d'estre un tres-excellent Febrifuge," Ibid., 98–99. Emphasis added.

(*foyers*) of digestion.[143] This, according to Daquin, was the cause of the relapses which had earlier discredited the drug. As he later states, in cases where the drug is resisted by the *ferments* (synonymous with *levains*), purges may be necessary, but the dosage of the drug must then be redoubled afterward to compensate.[144] Here again Daquin shows a more traditional predilection for evacuations, but the disease-causing ferments remain the target: purges can at best clear the way for cinchona's specific action against them.

Daquin's *levains* and their disordered digestion through which they spread the sharp febrile matter into the blood and throughout is strongly reminiscent of Van Helmont and Sylvius' insistence on disordered digestion as the main factor in disease. For Sylvius, acidic pancreatic juice and alkaline bile were crucial to the process of digestion understood as a kind of fermentation: disease was usually acidic within this system and was the result of an incomplete neutralization during digestion that then spread that acidity to different parts of the body.[145]

The genesis of such ideas can also be found in Van Helmont, with important non-corporeal features not present in the versions of Sylvius and later iatrochemists: as Walter Pagel notes, the acid is not simply a chemical substance, but a ferment that is capable of formally rearranging matter, "an agent capable of trans-*forming* one thing into another," part of the interface between the immaterial formal realm of the archeus and the material world of the body.[146] Although acid served the function of separating the useful from the harmful in food, an erroneous command from the archeus could produce dangerous

[143] Lopiccoli, "L'uso terapeutico della chinachina," 76; Monginot, *Traité de la guérison des fièvres par le quinquina*, 28–29. This definition of *foyers* is from Lopiccoli; the term is also used by Monginot.

[144] Blégny, *Le Remède anglois*, 101.

[145] Ragland, "Experimenting with Chemical Bodies," 152–153.

[146] Pagel, *Joan Baptista van Helmont*, 131.

acidity in organs and other places where it should not be.[147] Such commands were often the result of the arrival of a "foreign guest" or disease *semen*, which enters the body and irritates the archeus by implanting its morbific idea, then actualized in matter by the agency of the archeus.[148] The acid was thus the material manifestation of an immaterial encounter between the archeus and an offending morbific idea.

The other semantic distinction of Daquin's section, the description of cinchona as a "specific," also has a lineage in earlier chymical medicine.[149] There is little trace in Daquin, however, of either the Avicennan "tota substantia" definition of specifics or the Helmontian view that they "expunge the Idea or Image of a Disease." [150] In Daquin's usage, the concept is closer in spirit to the Paracelsian *arcana*, that is, therapeutic substances which have special virtues for curing specific afflictions for reasons that are hidden from human knowledge and instead discovered through experience (or sometimes through their "signatures," shapes or qualities which suggest what illnesses they might respond to).[151]

The reference to *levains*, fermentation, and specifics in these descriptions suggests that the theoretical landscape for explaining a drug's therapeutic action that existed by the time Talbor was marketing his *remède anglois* in the late 1670s was considerably different from that of the 1650s. Jarcho and Maehle have shown that in that debate, the

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[147] Ibid., 138. Pagel explains: "This command, namely to form acid, normal or pathological, is given by an 'imperious nod' (*nutus potestativus*) and governmental ruling (*actio regiminis*). In this light, acid is the physical aspect or manifestation of the directive. As such it is not separable from, but immanent in, tissue and fibre. What is propagated is not acid, but the error. Disease through acid, then, was due to acid arising in not transported to, an organ" (138).

[148] Ibid., esp. 141–154.

[149] See above, sect. 1.

[150] Thomson, *Ortho-Methodoz Iatro-Chymike,* A6r.

[151] See above, sect. 2, and Paracelsus, *Essential Theoretical Writings*, 88b, 194a, 195n1.Weeks defines *arcanum* as "an occult and eternal incorporeal entity embodying the exalted virtue of an object or herb. It can be extracted in certain forms." He cites Martin Ruland, *Lexicon Alchemiae* (Franfurt: 1612; reprint: Hildesheim: Olms, 1964), which defines the term as follows: "Arcanum res est secreta, incorporabilis, atque immortalis, quae ab homine cognosci non potest, nisi per experientiam."

main voices on both sides were fixated on the difficulties of reconciling cinchona within Galenic medicine, particularly on the drug's lack of sensible evacuant properties and its classification as "hot."[152]

The responses of François Monginot to these questions are instructive. Monginot, it will be recalled, was one of the main sources on which Blégny drew, citing him even in his 1680 *Découverte*, where he observes that Monginot's views on cinchona are which he discusses in his own Académie des nouvelles découvertes. Writing in 1679 just as Talbor's febrifuge was coming into vogue, Monginot could observe that the basic problem of fever relapses (the catalyst of the 1650s debate) could be solved by the changes in preparation and dosage that the *remède anglois* pointed to, which he suggests came not in spite of but perhaps because of its inventor's *hardiesse* and lack of circumspection.[153] Likewise, Monginot's account of fevers used *levains* as its principal actors and described the pathological process as acidic fermentation using terms very similar to those of Blégny and Daquin.[154] He was still compelled to acknowledge the earlier debate, paying due respect to Chiflet and Plempius, but observed that the problem that had unfairly hampered the drug lay not so much in the theoretical arguments of its proponents and detractors but in the lack of experimentation in preparation or dosage.[155] Still, in the final fifteen pages of his seventy-five-page treatise, Monginot felt compelled

[152] Maehle, *Drugs on Trial*, 225–230; Jarcho, *Quinine's Predecessor*, chap. 3.

[153] Monginot, *Traité de la guérison des fièvres par le quinquina*, 6.

[154] Ibid., 19. "Il faut donc se representer que la fièvre est un boüilonnement ou une fermentation extraordinaire excite dans la masse du sang; Que cette fermentation contre nature altere ce sang, en trouble le mouvement, et pervertit l'économie de tout le corps; Que le principe ou la cause immediate de cette fermentation est un mauvais levain qui tient de l'aigre ou de l'acre et qui infecte et agite les humeurs de differente manière, d'où naist la difference des fièvres"

[155] Ibid., 5. "Depuis et pendant près de vingt ans, le quinquina a eu ses approbateurs et ses ennemis, selon que chacun en a sçeu faire un bon ou un mauvais usage, sans qu'on ait changé beaucoup sa préparation, non plus qu'a la manière de le donner."

to revisit the main objections of the 1650s debate, namely the lack of evacuations and cinchona's problematic qualities.

How could cinchona end the fever without provoking any sensible evacuations? The actual febrile *levain* or ferment, he argues, was present in the body only in minute quantities, and thus was expelled insensibly through sweat or urine. The ferment was able to transform food into febrile matter, but once it was extinguished, this transformation could be reversed and corrected. Most people, he observed, will report that their fevers often end suddenly without any substantial evacuations.[156]

On the question of qualities, Monginot observes that all specifics against fever can be classed as hot, and points out that cooling remedies could interfere with the febrile process, which is itself an "instrument" to resolve and dissipate the cause of the fever; the heat should not be fought. He argues that the virtue of cinchona lies in its other secondary qualities, notably its bitterness (*amertume*), which is what allows it to "extinguish and resolve" unnatural fermentation. He also points out that any patient who has taken cinchona over a long period of time following a fever will observe that they felt no excess of heat while taking it.[157]

So long as the doses of cinchona are sufficiently strong and continue to be administered even after the end of the fever (to destroy any surviving ferments), then relapses will not occur. Any patients who believe they experience relapse have more likely developed a wholly new *levain*: "these returns are less likely to come from some

[156] Ibid., 59–60.
[157] Ibid., 64–66.

*levain* hidden somewhere in the body, rather than those which are reborn through a new occasion."[158]

Blégny and Daquin, writing in 1682 just a few years after Monginot, felt no need to reckon with these questions at all and believed that the new preparation and dosage of Talbor's *remède anglois* had definitively solved the problem of relapse which had plagued the drug since the 1650s. The problematic Galenic qualities could be dismissed with the wave of a hand, and the febrile *levain*, acidic fermentation, and essential bitterness of cinchona could be taken as given.

*4. The persistence of the acid-alkali theory in Fagon's account of cinchona, 1697*

The final point to be made about this fermentationist account of fevers and the "specific" action of cinchona has to do with its staying power in the halls of high court medicine: these ideas were also expounded on by Daquin's successor as first physician, Guy-Crescent Fagon, fifteen years later. They appear in a short, fifteen-page treatise, written in 1697 in response to the frequent fever relapses of Charles II of Spain, but not published until 1705 as "Nouvelles reflections nécessaires pour se servir utilement du kinkina," following *Les admirables qualitez du kinkina*. Like Daquin, Fagon pursued an active career but published little in his life.[159] As such, this treatise, like Daquin's commentary in *Le remède anglois*, offers us a precious window on the views of

[158] "Ces retours viendroient bien moins de quelque levain qui seroit caché en quelque endroit, que de ceux qui renaîtroient par de nouvelles occasions," Ibid., 70.

[159] On Fagon's publications, see Augustin-Marie-François-Jean Grozieux de Laguérenne, *Guy-Crescent Fagon, archiatre de Louis XIV, surintendant du Jardin royal des plantes (1638-1718)*, Thèse pour le doctorat en médecine, Paris (Paris: L. Arnette, 1930), 107–108.

Fagon's other noteworthy publication, a formal Latin *quaestio* later translated into French , was on another exotic, namely tobacco: see Guy-Crescent Fagon and Claude Berger, *Quæstio medica ... An ex tabaci usu frequenti vitæ summa brevior? Praes. J.C. Fagon.* (François Muguet: Paris, 1699); Guy-Crescent Fagon and Claudius Berger, "Question agitée le 26 de Mars de l'année 1699 [...] Sçavoir si le fréquent usage du tabac abrege la vie," in *De la génération des vers dans le corps de l'homme*, by Nicolas Andry de Bois-Regard (Paris: Laurent d'Houry, 1700), 347–86.

therapeutic action held by the two men whose medical opinions were most important in approving new remedies for royal privileges at this crucial early stage of the medical privilege regime.

Fagon opens by declaring that "there is no remedy more specific than cinchona" against fevers,[160] and roundly rejects the view of cinchona's action which supposed that it was only a temporary remedy bound to produce relapses of fever: according to this view, first articulated by Lémery (see above), cinchona traps the ferment in a coagulum but it eventually breaks loose. According to Fagon, the true effect of cinchona could be expressed in chymical terms virtually identical to those used by Blégny, Daquin, and Monginot before them:

> With its specific bitterness (*amertume spécifique*), it dulls (*amortit*) the sharpness of the fever's leaven, in the first place through its mixing with the febrile leaven that it encounters along the way, with which it ferments, like crabs eyes with distilled vinegar, and through this effervescence it so destroys the sharpness of this leaven, softening it and rendering it unable to trouble or agitate the blood.[161]

The "natural disposition of the stomach's solvent" is thus restored, re-establishing the proper concoction of chyle.[162] The active virtue of the cinchona is also distributed through the rest of the blood, where it finds other sharp (acidic) serous fluids that had

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[160] In spite of his insistence on the specificity of cinchona here, Fagon would a few years later approve the Chevalier de Guiller's *poudre fébrifuge*, an indigenous European alternative to cinchona. See below, chapter 5.

[161] "Il amortit par son amertume spécifique l'aigreur du levain de la fièvre, ce qu'il fait en premier lieu par son mélange avec le levain fiévreux qu'il rencontre en son chemin, avec lequel il fermente, comme les yeux d'Ecrevice avec le vinaigre distillé, et par ce boüillonnement détruit tellement l'aigreur de ce levain, qu'il l'adoucit et n'est plus en état de troubler le sang ni de l'agitter," Guy-Crescent Fagon, "Nouvelles reflections necesaires pour se servir utilement du kinkina," in *Les admirables qualitez du kinkina [...] avec de Nouvelles réflexions pour s'en servir, faites par Monsieur Fagon premier Médecin du Roi en 1697* (Paris: Martin et George Jouvenel, 1705), 167–169.

[162] The passage above continues: "et en seconde lieu, il resserre par son amertume legerement astringente, les membranes de l'estomac et restablit la disposition naturelle de son dissolvant, et par ce moyen contribue à la coction parfaite du Chile, dont la douceur reparée tempere insensiblement le sang et toutes les humeurs, et rectifie petit à petit, tout ce qui pouroit renouveller le levain de la fièvre, ou en animer les restes ademy amortis."

been spread by the febrile *levain*, and after effervescing (*boüillonnant*) with them, they are expelled through transpiration, thus preventing any renewal of the febrile or the "animation" of half-softened remains (*les restes ademy amortis*).

The central analogy Fagon employs is that of "crab's eyes." These are calcareous nodules that form on the stomachs of crayfish, which, when placed in an acid such as vinegar, have the effect of neutralizing it. This was a well-used image for acid-alkali reactions, and can be found in Van Helmont's *Febrium doctrina inaudita*, which, although it does not address cinchona, likewise points to acid-alkali neutralization process beginning in the stomach as the solution to intermittent fevers.[163]

The language of bitterness countering fermentations also plays a role in Fagon's entries in the royal *Journal de santé*, particularly his commentary on some of the treatments he had witnessed while his predecessor, Daquin, was still first physician. In one particular case where the king was suffering from fever, Daquin was unwilling to follow Fagon's advice in increasing the quantity of cinchona and administering it more frequently and for longer periods. This led Fagon to use the intermediary channel of Madame de Maintenon to suggest the idea directly to the king. Here too we find the language of the cinchona's "amortissement" (mortifying or dulling) of the sharp febrile *levain*, complete with a defense of the use of continued wine-infusions of cinchona. He also defended cinchona against the charge of overheating the king's body through the corpuscular image of sharp points of the wine being blunted or absorbed by the cinchona,

[163] Joan Baptista Van Helmont, *Ortus medicinae: Id est Initia physicae inaudita. Progressus medicinae novus, in morborum ultionem, ad vitam longam.* (Amsterdam: Elzevir, 1648), 787. The crabs' eyes reaction would be a well-used image for acid-alkali neutralization in eighteenth-century texts: see notably Chomel's description in his entry on pearls in the *Dictionnaire oeconomique*; or later in the *Encyclopédie* 5:357, where the eyes are described as sharing the attributes common to all "absorbans ou alkalis terreux."

thus preventing its tartar from making an impression.[164] Although as we have seen Daquin advised stronger, more frequent dosage over longer periods of time (especially as compared to the original "Schedula" recipe), Fagon seems to have found his predecessor insufficiently zealous with cinchona. It should be noted however that Fagon had in fact recently ousted Daquin as first physician, and his earliest entries in the *Journal de santé* can be read as self-serving "second opinion" commentaries on his predecessor's "errors." Despite their differences, both first physicians shared a basic conception of how the drug worked within the body, and it seems likely that this conception helped govern their response to petitions for exclusive-sales privileges.

Distant though such causal explanations may at first seem from straightforward therapeutics, misunderstanding the effects of cinchona could have dire consequences, according to Fagon. Many doctors would purge the patient after administering cinchona, presumably to evacuate the putrefying humors it had isolated, but as Fagon saw it, this could only have the effect of ejecting the cinchona itself. This would have the unintended consequence of delivering the febrile *levain* from its destroyer, leaving it free to re-animate itself.[165] Instead of administering purgatives, Fagon argued that the best way to deal with the relapse problem was to take cinchona more frequently, to ensure no leftover febrile *levain* remained to reignite the fever. Fagon did acknowledge that some critics might argue that cinchona was a hot drug and could have a detrimental effect on the patient if taken for such a long period. Against this view, and following the mainstream of opinion from Monginot onward, he argued in contrast that it was not hot or cold at all, but rather, that it acted through its bitter (*amertume*)—i.e. alkaline—and astringent

[164] Antoine Daquin, Guy-Crescent Fagon, and Antoine Vallot, *Journal de la santé du roi Louis XIV de l'année 1647 à l'année 1711*, ed. Joseph-Adrien Leroi (Paris: Durand, 1862), 211–213.

[165] Fagon, "Nouvelles reflections," 174.

(*astriction*) qualities, qualities which he attributes explicitly to the ancient authority of Hippocrates and Democritus.[166]

The basic agreement between Fagon and Daquin's descriptions of cinchona's therapeutic action illustrate an important continuity in pharmacological concepts between the two first physicians despite their other differences of opinion. Considering the critical role of the royal first physicians in the granting of pharmaceutical privileges, this commonality of opinion between Daquin and Fagon suggests that in France, privileged drugs were assessed with a "chymical criterion" of therapeutic action in mind. In the absence of sources specifying individual rationales for recommending privileges for this or that drug, it is of course impossible to say for certain, but the prominence of chymical ideas amongst two figures who held kingdom-wide regulatory powers almost certainly marks a unique phenomenon for this period, particularly in comparison to the Galenic criterion that generally held sway in the *protomedicati* of Spain and Italy.

5. *Medicinal specifics, acid-alkali pathology and the materialist reading of Van Helmont*

At first glance it seems incongruent that the notion of a medicinal specific would not also entail a parallel concept, one which Walter Pagel called "the ontological conception of disease." This concept, present as the morbific *peregrinus exoticus* in Van Helmont and as the disease *semina* he held in common with Paracelsian authors, would seem to be the logical counterpart of the concept of a medicinal "specific." But instead, we find Daquin and later Fagon making use of specifics against diseases which appear to be defined physiologically as disordered ferments rather than ontologically, as ferments produced by the encounter of a *peregrinus exoticus* and a vital archeus, as in Van

[166] Ibid., 175–176.

Helmont. The *quidditas*, or as Van Helmont's English translator John Chandler rendered it, "the essential thingliness of fevers" appears to drop out to some degree: instead the images of pathology and of therapeutic action given to us by Blégny and Daquin lead us into the then-popular "acid-alkali" or "neutralization" theory, which appears at first glance to be a basically physiological model, focused at returning bodily fluids to a state of internal balance not so different from humoral medicine.

This apparent disjuncture has prompted some scholars, such as Don G. Bates and Andrew Wear, to question whether the chymical conceptions of disease in this period were really all that revolutionary. Bates has described Willis' fermentation theory as "new wine in old bottles," deeming it to be "conservative" by comparison to the immaterial "formal *ens*" of Van Helmont, which departed much more substantively from Galenism and thus constitutes a "truly alternative worldview."[167] For Bates, the fever theories of Willis are representative of this period insofar as they were "transitional and derivative," a characterization he asserts is also "certainly true" of Sylvius. Referring to Willis in particular, Bates observes that more work would be needed to confirm the hypothesis, but "it does seem likely to me that his work is a fairly conservative transformation (almost translation) of Galenic doctrine into a 'modern' corpuscularian materialism."[168] The vocabulary is modern, drawn from Harvey, Descartes, and Gassendi; but for Bates the implicit framework is still traditional Galenism.[169] He supports this claim by arguing that Willisian fermentation resembles Galenic putrefaction (e.g. in heat production and breakdown of substance) more closely than it does

[167] Don G. Bates, "Thomas Willis and the Fevers Literature of the Seventeenth Century," in *Theories of Fever from Antiquity to the Enlightenment (Medical History Supplement No. 1)* (London: Wellcome Institute for the History of Medicine, 1981), 52.

[168] Ibid., 55.

[169] Ibid., 51, 53.

Helmontian fermentation, which is more of an interface between the material world and the immaterial *semina* or formal *ens* that actively rearranges matter, so "Willis's apparent use of Helmontian terms does not withstand examination."[170]

Van Helmont himself probably would not have been pleased with the "materialization" of his ideas in physiology and pathology: indeed, Pagel has pointed out that Van Helmont had already condemned materialist tendencies in some of Paracelsus' writings, and observed that the "materialist speculations" of Willis would have been "distinctly unacceptable" to Van Helmont.[171] The uniqueness and sheer complexity of Van Helmont's medical ideas make it difficult to assess his influence on later thinkers, but focusing on whether or not a given thinker adhered to all of his doctrines in all their complexity tends to obscure our appreciation of his considerable impact on late seventeenth-century medicine. As with any thinker, Van Helmont's followers appropriated and transformed given ideas and omitted others as it suited them. As such I am inclined against using "pure" Helmontianism merely as a criterion for assessing how far Sylvius or figures like Blégny fell from the true path, and would argue that even if Van Helmont himself might have found their materialist reading "distinctly unpalatable," they still constitute an important part of his legacy in the history of medicine.

In a similar vein, Evan Ragland has taken issue with Andrew Wear's assessment that "Changes in physiological theories had little effect on medical practice, where the perceived need to evacuate the body of some malign substance, now often seen as

[170] Ibid., 54.

[171] Pagel, *Joan Baptista van Helmont*, 83; Pagel, "Van Helmont's Concept of Disease," 438–439; Bates, "Thomas Willis," 55.

chemical rather than humoral, still shaped therapeutic justifications."[172] A more detailed version of this argument appears in *Knowledge and Practice in English Medicine, 1550-1680* (2000), in which Wear argues that the Helmontian revolution "failed" in England not just because it lacked institutional support and because several of its proponents died in the 1665 plague, but also because patients revolted against it, preferring to stick to the language and practices of traditional Galenism. On the whole, however, Wear follows Bates in distinguishing between "pure" Helmontians and learned physicians who appropriated chymical ideas, more or less superficially, as a "modernised" vocabulary to clothe a still traditional medicine; and he likewise uses Willis as his prime example.[173]

Ragland has also criticized this view of what might be called "therapeutic immobility," pointing out that viewing the body chymically not only opened the door to analogies between physiological phenomena and phenomena observed through in vitro chymical experimentation, but also that "the neutralization model of body chymistry emphasized therapy via chymical changes within the body, rather than purgation or evacuation. Surely this was an important new conceptualization of disease and drugs."[174] The debate over fevers outlined in this chapter offers an excellent example of this point: particularly as deployed by Daquin and Monginot, the acid-alkali model allowed for healing to occur in the absence of any *sensible* evacuations, by extinguishing the tiny *levain* and ejecting it through transpiration and allowing the body to restore the febrile matter produced by its pathological process. The therapeutic action is only minimally evacuative; what remains rests on the idea of chymically transforming and "rectifying"

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[172] Andrew Wear, "Early Modern Europe, 1500-1700," in *The Western Medical Tradition, 800 BC to AD 1800* (Cambridge: Cambridge University Press, 1995), 360.

[173] Andrew Wear, *Knowledge and Practice in English Medicine, 1550-1680* (Cambridge and New York: Cambridge University Press, 2000), 469–473.

[174] Ragland, "Experimenting with Chemical Bodies," 198.

corrupted febrile matter to once again become what it ought to have been. When practitioners like the Capuchin Aignan, or Monginot, Blégny, Daquin, and Fagon sought answers to the question of the effect of a drug, they moved away from the models of repletion and expulsion of traditional Galenism, and drew instead on novel chymical conceptions of what was happening inside the human body—conceptions which emphasized transformation.

Likewise, although the explicitly non-corporeal "ontology of disease" proposed by Van Helmont is largely absent from the accounts of fevers reviewed in this chapter, a certain material "thingliness" does seem to remain, particularly in Daquin, Monginot, and Fagon, who emphasize the material pathogenic *agent*—in the form of the *levain* or ferment—much more than the pathological *process* of fermentation or effervescence. As they describe it, fever engenders an acid/alkali imbalance, which often begins with an incomplete or disordered digestion, but the fever is not in itself reducible to this imbalance. Therapeutically speaking, one could not simply ingest any old alkali substance in whatever quantity until the overly acidic milieu of the stomach and the blood were neutralized.[175] As Blégny and Daquin point out, other bitter substances may have some effect on fevers, but none are as "specific" or able to rectify the *levain* so effectively. We find in each of these authors an insistence on striking at a root cause, the *levain*, which, rather than being immaterial like the disease *semina*, is understood to be very small and intractable. This *levain* finds its counterpart in the "specific bitterness" of an alkali substance, cinchona. Unless it is stopped, this *levain* will continue its process of

[175] Although the digestive process is the main locus for fever pathogenesis in these accounts, in some cases, the *levain* even exists independently outside of the human body: Blégny for example refers at one point, dealing with malignant (not intermittent) fevers, to "sels arsenicaux répandus dans l'air que nous inspirons, ou cachez dans les alimens que nous avalons" (119). Are these arsenical salts descendants of the Helmontian *causa occasionalis*, or material versions of the disease *semina*?

fermentation, transmuting food and bodily matter into its acidic febrile matter: no amount of evacuation of such matter will correct this root cause, which the "specific" alkalinity of cinchona alone can rectify. Shorn of its links to the non-corporeal agents of Van Helmont, the febrile *levain* or ferment seems to persist almost as a materialist descendant of the disease *semina* of earlier iatrochemistry, capable of enacting material transmutation, and "extinguishable" only by the "specific" bitterness of cinchona.

The prominence of this acid-alkali theory in debates surrounding cinchona raises much broader questions about its role in medicine during this period more generally. Why did Sylvius and others decide to "materialize" Helmontian ideas at all? Looking beyond France to Germany and England, why was the acid-alkali theory so attractive to practitioners selling proprietary remedies, such as Otto Tachenius and his viperine salt, or John Colbatch and his vulnerary powder?[176] We will need a full treatment of the acid-alkali theory, from Van Helmont through to Sylvius, Tachenius, and the critique of Robert Boyle, in order to answer this question. Until that time, Ragland's establishment of the origins of the system in a "materialist" reading of Van Helmont and his sketch of "Acids and Alkalies Effervescing across Europe" will have to suffice.[177]

### *6. Conclusion*

The stories of the Louvre Capucins and Robert Talbor are fundamental to the overall argument of this dissertation in three ways: first, the court patronage they were offered in France circa 1680 can be seen as a prototype of the medical privilege regime. Although they did not receive an exclusive sales privilege, the Capuchins received

[176] See above, this chapter, sect. 1; and ch. 4 sect. 3 on Colbatch.

[177] Ragland's account, which is part of his larger dissertation on the "long history" of experiments on digestion, supersedes that of Marie Boas Hall and the more recent summary of Allen Debus: see Boas, "Acid and alkali in seventeenth century chemistry"; Debus, *Chemistry and Medical Debate*, chap. 4, 103–137.

support in the form of their pension and laboratory, which they used to produce their remedies for the court, the poor of Paris, and the French army, anticipating the much larger operation to be crafted a decade later by Helvétius. Talbor for his part enjoyed similar support, with the distinction that his was based upon a singular remedy, his cinchona-based *remède anglois*, the secret of which he disclosed to the king's first physician under the condition that it only be published after his death. This model has obvious affinities with the later privilege regime, which also served the function (from the vendor's perspective) of insuring and protecting a profitable medical secret.

Second, the chymical ideas and practices of the Louvre Capuchins, manifested particularly well in the Helmontian and "chymical-Hippocratic" ideas of Aignan, demonstrate the prominence of chymical medicine at court in this period. A reading of Talbor's *Pyretologia* likewise reveals him to have been influenced by a reading of Van Helmont. The Capuchins, like Talbor, are often described in survey texts as effectively having come out of nowhere, or at best (in the case of Talbor) from the primeval muck of medical empiricism. A reading of their extant writings, however, immediately reveals that although learned physicians might have classed them as "empirics," they were equipped with learning of their own, being conversant in contemporary chymical texts and practices. The prominence of such ideas is particularly surprising because both the Capuchins and Talbor arrived at court in the midst of the famous Affair of Poisons, which posed significant challenges to the public profile of chymistry by renewing its longstanding association with poisoning. As the previous chapter has shown, the Affair ultimately led to the legal regulation on the circulation of chymical substances and

requiring permits for chymical equipment. Iatrochemical ideas about pathology and therapy, however, appear to have persisted at court in spite of such restrictions.

Finally, the third point surrounds what I will call the "chymical criterion" for a medicinal specific, a shorthand for the new understanding of pathology and therapeutic action through reference to the then-popular acid-alkali theory, which appears first here in the case of cinchona but which will recur again throughout the rest of the dissertation. We have seen already that it appears in the writings of the two most prominent figures in according proprietary medical privileges, namely the royal first physicians Daquin and Fagon, and we shall see it again in chapter 4 through the language of "specifics" used by Helvétius to explain his *remède spécifique* against dysentery; and again in chapter 5, with the assessment provided by the naval physician Boizard concerning Ferdinand de Guiller's tithymal-based febrifuge, an "indigenous" (that is, native to France) alternative to the "exotic" cinchona. It should of course be mentioned that not all proprietary remedies were touted as "specifics"; the acid-alkali theory was only employed by a handful of important vendors and court physicians, and it was always one potential "criterion" among many. The prominence of both of these ideas in the writings of Daquin and Fagon, the two key medical figures for the allotment of privileges in this period, nonetheless recommends them to our attention, as does their recurrence in these subsequent chapters.

The high profile of chymical ideas among court physicians reminds us that the late seventeenth century was a period where medical opinions were in a state of flux, a fact that was also appreciated by contemporaries. A fitting example of this appreciation occurs in the debate over the Louvre Capuchins in the *Mercure galant*, which opened this

chapter. An anonymous letter signed as "Hermocrate" from Montpellier, printed in response to the critics of the Louvre Capuchins, assessed the medical landscape in 1679:

> Truth is so hidden, and science so narrow, that there is no man who can dare boast that he knows something true and real. Reflect, if you please, on the different opinions of the time. Some are filled with Van Helmont and Willis, others with Descartes, or Tachenius. Following these modern authors, some hold to the party of the four humors, others to one alone, which breaks itself into several different parts; others hold to that of the acids and the alkalis. Each performs experiments, and each explains them according to his system, which is established on principles that differ one from the other.[178]

The growing variety of intellectual options—described as rival doctrines or schools of medicine—was a source of disquiet, and even a cause for scepticism, as this passage suggests. This exciting (if potentially obfuscating) intellectual ferment forms a key backdrop to this dissertation, along with a panoply of social and economic features, such as the arrival of exotic new therapeutic substances into Europe, the growing medical needs of the fiscal-military state, and the breakdown of medieval corporatism exemplified by the privilege regime. Neither traditional Galenism, nor orthodox Helmontianism would rule the day, and the acid-alkali pathological model here described had a variety of different permutations with differing points of emphasis, all of which would not persist very far into the eighteenth century or succeed in displacing the four humours. Intellectually speaking, the assessment of given therapeutic substances in this period did not occur with reference to any single "criterion," be it chymical or Galenic. The changing fortunes of the acid-alkali model were, like those of the alternative models,

[178] "La Verité est si cachée, et la Science si bornée, qu'il n'y a point d'Homme qui ose se vanter de sçavoir quelque chose de bon et de réel. Faites, s'il vous plaist, réflexion aux différentes opinions du temps. Les uns sont remplis de Vanhelmont ou de Villis, les autres de Descartes ou de Tachenius. Suivant ces Autheurs modernes, les uns tiennent le party des quatre humeurs, ou d'une seule, qui se brise en plusieurs petites parties différentes; et les autres tiennent celuy des Acides et des Alkalis. Chacun fait des expériences, et chacun les explique selon son Sistème qui est étably sur des principes differens les uns des autres," *Mercure galant* (January 1679), 162-163.

subject to a dialectical play with the whole gamut of these social and economic factors, particularly the constant testing and retesting of new substances and preparations. While it is true that the "chymical criterion" certainly shaped the reception of cinchona and other drugs, the peculiarities of the drugs themselves also helped disseminate chymical ideas among Europe's physicians.

# Chapter 3

## The Contugi family and the true *orviétan*:

## The legitimacy, exclusivity, and transmission of a secret remedy, 1647-1741

For nearly a century, from 1647-1741, four successive generations of the Contugi family fought to extend and later preserve their exclusive privilege to sell the antidote known as *orviétan*. Touted primarily as a cure for all poisons, from the venom of vipers and rabid dogs, to human poisons like arsenic and pestilential diseases like plague and smallpox, *orviétan* came to be a sort of panacea for any number of lesser discomforts such as colic and digestion problems. The efforts of the family to preserve their exclusive legal privilege, first granted to the family patriarch, Christophe Contugi, in 1647, were also necessarily tied to their efforts to defend the hereditary medical secret of *orviétan*. Their repeated struggles illustrate how, even with the support of royal letters patent, the vendors of proprietary medicines in seventeenth century France were still engaged in a constant struggle with competitors, from the troupes of other medical charlatans to the apothecaries of the royal households and of the city of Paris. Such letters were perhaps the most powerful sources of authority available in the medical world of Ancien Régime France, but they were still not in themselves sufficient to wholly override the issues of legitimacy and exclusivity, which came up time and again in the recurrent legal battles that span the period of the family's tenure of the privilege.

The persistence of these struggles led them to generate a surprisingly large corpus of print and manuscript sources, the richness of which was first recognized well over a

century ago by and Gustave Planchon (1892) and Claude Stéphen Le Paulmier (1893).[1] Le Paulmier's *L'Orviétan* is the better known of the two works, tracing the genealogy and business fortunes of the Contugi family and providing a voluminous appendix of over fifty *pièces justificatives*, including letters patent, *arrêts* from various courts, and a panoply of notarized documents. In spite of its age, Le Paulmier's account continues to serve as the basis for virtually all discussions of the Contugi family in the historiography, most recently the work of Brockliss and Jones.[2] Planchon's articles are less well-known, and focus on the legal conflicts between the Contugi family and Parisian apothecaries. Their accounts were written virtually at the same time—Le Paulmier notes that his book was already in press by the time he learned of Planchon's articles—and while some overlap exists between them, each drew upon different archival sources and thus should be consulted in conjunction.[3]

The importation of Italian charlatanism into France has seen a more modern reappraisal through the work of Brockliss and Jones,[4] but to the best of my knowledge this chapter marks the first archival inquiry into the Contugi family business in over a century. Charlatans have gained a much higher profile in the historiography of early modern medicine over the past twenty years, but none of this research has investigated French archives, focusing instead on the Italian epicenter of the charlatan phenomenon.

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[1] Gustave Planchon, "Notes sur l'histoire de l'Orviétan," *Journal de Pharmacie et de Chimie* 26, no. 3–7 (1892): no. 3, 97–103, no. 4, 145–52, no. 5, 193–98, no. 6, 241–50, no. 7, 289–98; Claude-Stéphen Le Paulmier, *L'Orviétan. Histoire d'une famille de charlatans du Pont-Neuf aux XVIIe et XVIIIe siècles* (Paris: Librairie illustrée, 1893).

[2] Laurence Brockliss and Colin Jones, *The Medical World of Early Modern France* (Oxford: Clarendon Press, 1997), 239–241.

[3] Planchon worked primarily with the sources held at the Paris École de pharmacie, now the BIUS Pharmacie, which are mainly copies of legal briefs (*factums* or *mémoires*) and *arrêts* that were kept in the archives of the *communauté des épiciers-apothicaires*; Le Paulmier's book focused on sources at the Archives nationales and the notarial records of the Minutier central.

[4] Brockliss and Jones, *The Medical World of Early Modern France*, 230–238.

David Gentilcore has published a foundational study of medical charlatanism in Italy (2006), examining the phenomenon from multiple angles, including its origins, typology, microhistorical studies of the careers individual charlatans, examinations of their materia medica, marketing strategies, and licensing, all supported by voluminous quantitative data, available online through the Italian Charlatans Database.[5] Although references to *orviétan* are sprinkled throughout his text, Gentilcore leaves the drug in the background and mentions the Contugi family only once, citing Le Paulmier.[6] The chapter on charlatans in his earlier *Healers and Healing in Early Modern Italy* (1998) gives much more attention to *orviétan*, but only two paragraphs are allotted to the Contugi family in France, likewise based on Le Paulmier.[7] The only recent monograph on *orviétan* is Patrizia Catellani and Renzo Console's *L'Orvietano* (2004), which provides an assessment of *orviétan*'s appearances in literature and theatre and, most importantly, an excellent analysis of the recipes for *orviétan* from printed pharmacopeias, upon which I will draw in section 4 of this chapter.[8] For material on the Contugi family, however, Catellani and Console are likewise reliant on the older studies of Planchon and Le Paulmier.

Expanding on the archival corpus assembled by Planchon and Le Paulmier, this chapter will provide a reappraisal of the trials and tribulations of the Contugi family. In so doing it provides a French point of comparison to the Italian experience, showing how

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[5] David Gentilcore, *Medical Charlatanism in Early Modern Italy* (Oxford: Oxford University Press, 2006); and "Italian Charlatans Database, 1550-1800," Economic and Data Service, <http://www.esds.ac.uk/findingData/snDescription.asp?sn=5800> (accessed February 5 2011).

[6] Ibid., 248n67.

[7] David Gentilcore, *Healers and Healing in Early Modern Italy* (Manchester: Manchester University Press, 1998), chaps. 4, esp. 98–99 on the Contugi family.

[8] Patrizia Catellani and Renzo Console, *L'Orvietano*, Accademia Nazionale di Scienze Lettere e Arte di Modena, Collana di studi 25 (Pisa: ETS, 2004).

charlatanism played out in the absence of physician-dominated regulatory bodies like the Italian *protomedicato* tribunals in a context where charlatans could be legitimated by royal authority, which ran above that of the local urban corporations. With this goal in mind, I will provide a brief account of the origins of the Contugi *orviétan* privilege, followed by four detailed case studies documenting the efforts of the Contugi family to uphold their privilege to sell *orviétan*. The first case study focuses on Christophe Contugi's efforts to secure the approval of the Paris Faculty of Medicine in 1648, less than a year after inheriting the secret of *orviétan* and gaining his royal letters patent. The second follows a sequence of legal battles at the Parlement of Toulouse and the royal Conseil privé in 1656, wherein Contugi attempted to enforce his kingdom-wide privilege in the Languedoc and faced off against a rival charlatan, Christophe Polony, who likewise claimed to be the sole inheritor of the secret of *orviétan*. The third surrounds the efforts of Christophe Contugi's widow and son to keep the secret in the family (against the growing number of *orviétan* recipes appearing in pharmacopeias) and to preserve the exclusive privilege to sell *orviétan* in Paris against the alleged interloping of a royal apothecary, Antoine Boulogne, in the years 1683-1685. Finally, the fourth episode will chart the succession crises which typify the last two generations of the privilege's tenure by the Contugi family, as well as the growing involvement of Paris Faculty doctors in the *orviétan* business. These developments culminated in 1741 with the actual sale of the privilege to a Faculty doctor, Charles Dionis, which marks a striking conclusion to its ninety-four year tenure by the Contugi family.

The questions that I follow through these cases are: How was *orviétan* legitimated both medically and legally? In the pluralistic legal environment of early modern France,

what options did a family like the Contugi's have at their disposal to preserve their alleged monopoly over the name "*orviétan*" as well as the sign and mark under which they sold it? When conflicting privileges arose, how did civil magistrates settle disputes between rival vendors? How could medical secrets and medical privileges be "kept in the family" as inherited goods, transmitted from one generation to the next? How did such particularistic privileges coexist alongside (and often clash with) corporate privileges? And finally, when a medical secret was publicly revealed, could vendors continue to rely on their privileges and "brand recognition" to maintain their monopoly?

This chapter also reveals an astonishing story of privilege as an engine of familial social mobility and the attendant blurring of boundaries between supposed "fringe" and "élite" practitioners in the Parisian medical community. The Contugis started out in the seventeenth century as "charlatans" in the classic Italian sense of the term: they were costumed performers, marketing their antidote on stage to passers-by through an entertaining skit. By the eighteenth century, however, they were reputable bourgeois with their own boutique and a well-established, legally-protected niche in the urban medical economy. Even the first-generation family patriarch, Christophe, died a wealthy and respected bourgeois of Paris and sent his own younger sons to study and apprentice within the corporate medical community.[9] Despite their fearsome reputation as defenders of orthodoxy in medicine, the doctors of the Paris Faculty also emerge from this narrative as sometime-allies of the charlatans, and in fact, in the case of Dionis, as their successors.

1. *Orviétan comes to France: The origins of the Contugi orviétan privilege*

Tracking the origins of *orviétan* will take us back to the early decades of the seventeenth century, when the first signs of the importation of Italian-style medical

[9] For details see below, sect. 5.

charlatanism began to appear in France; then, back to the Italian town of Orvieto, where it was allegedly invented at the end of the sixteenth century; and then, even further back, into the long-term history of theriac, one of its principle ingredients. Following a brief sketch of the history of theriac, this section will restrict itself to the origins of *orviétan* in Italy and account for how it came into the hands of the Contugi family in France.

The history of *orviétan* adds an early modern episode to theriac's millennial history. All published preparations of *orviétan* included quantities of theriac or its most conspicuous ingredient—viper flesh—and many later seventeenth-century pharmacopoeias explicitly related it to theriac.[10] This ties *orviétan* into the mythology surrounding theriac as a poison antidote. Theriac was held to have been adapted by Andromachus from mithridatium, the ancient antidote attributed to King Mithridates VI of Pontus, who devised it to protect himself from being poisoned. We have already seen that theriac was the example par excellence of a poison antidote, a variety of remedy which stood apart from normal Galenic pharmacology, and whose action was explicable as a form of occult causation derived from the specific form the compound acquired through a process of fermentation.[11] *Orviétan* has been linked to theriac by Gentilcore as well as Catellani and Console, but not to the larger history of medicinal specifics. As I have explained in Chapter 2, antidotes like theriac furnished explanatory categories to physicians who sought to explain drugs that seemed to work in ways unexplained by their manifest qualities. The 1966 monograph of Gilbert Watson remains the only long-term history the drug, but there have been signs of a revival of interest among historians of medicine in recent years: Christiane Nockels Fabbri has studied the use of theriac in

[10] See below, sect. 4.
[11] See above, ch. 2, sect. 1.

against plague in the European Middle Ages, stressing the important amounts of opium in most medieval forms of theriac—a tendency which continued into the early modern period; and Carla Nappi has detailed the appropriation and transformation of theriac recipes in early modern China.[12]

The most extensive and judicious account of the origins of *orviétan* which I have been able to find is that provided by the fascinating physician and traveller Pierre-Martin de la Martinière (1634-1676) in his 1665 *Traitté des compositions du mitridat, du thériaque, de l'orviétan*, published as an addition to his extensive head-to-toe medical compendium, *L'Empiric charitable*.[13] This source also contains one of the earliest printed recipes for *orviétan*. La Martinière was an author of popular medical works: throughout his voluminous writings, he reproached charlatans and alchemists as occasional fraudsters, all the while recognizing their often useful medical innovations and casting himself as a charitable discloser of medical secrets for the benefit of the common people.[14] In his *Traitté*, after describing the composition of theriac and mithridatium, he

[12] Gilbert Watson, *Theriac and Mithridatium: A Study in Therapeutics* (London: Wellcome Historical Medical Library, 1966); Christiane Nockels Fabbri, "Treating Medieval Plague: The Wonderful Virtues of Theriac," *Early Science and Medicine* 12, no. 3 (2007): 247–83; Carla Nappi, "Bolatu's Pharmacy: Theriac in Early Modern China," *Early Science and Medicine* 14, no. 6 (2009): 737–64. Theriac was also the subject of a 2010 conference in Paris whose proceedings are forthcoming: Françoise Michau and Véronique Boudon-Millot, eds. "Histoire, transmission et acculturation de la Thériaque, Actes du colloque de Paris (18 mars 2010)," forthcoming.

[13] Pierre-Martin de La Martinière, *Traitté des compositions du mitridat, du thériaque, de l'orviétan, et des confections d'alkermes et d'hyacinthe et autres compositions antidotoires. Partie de l'Empiric charitable.* (Paris: chez l'autheur, 1665).

[14] See Françoise Loux, *Pierre-Martin de La Martinière: un médecin au XVIIe siècle* (Paris: Imago, 1988). La Martinière lived a short but eventful life, outlined in Loux, 11-27, which is worth summarizing here. Orphaned by his father and estranged from his mother, La Martinière left Paris at the age of nine and apprenticed with a military surgeon. At the age of twelve, he set sail onboard a Portugese ship bound for the East Indies, but it was captured by corsairs. He was liberated by the knights of Malta at the age of sixteen after four years of slavery; he served hospital surgeon in Naples and Rome, and learned alchemy (in which he remained interested, if somewhat skeptically) with a knight of Malta in Milan and followed an alchemist from Turin to Germany. In 1653 he then served as a ship's surgeon in the Baltic with a fur trading and exploratory expedition out of Coppenhagen; he returned to France in 1654 and lived near Rouen (where he may or may not have taken a medical degree) and became "Médecin chymique de la cour

launches into a critical investigation of the origins of *orviétan*, which he portrays as a latter-day successor of these two drugs.

Before providing what he takes to be the "true" account of *orviétan*'s origins, however, La Martinière first tells the story which is given by most of its vendors. This "fable," as he qualifies it, traces the antidote back to a shepherd (sometimes named Lupi) who was tending his flock of sheep near Orvieto.[15] His flock was troubled by poisonous snakes, especially while he was away at church, but one day he had the good fortune of observing how one of his sheep, after swelling up from a snakebite, ran to the edge of a pond of stagnant water and ate a certain plant. After this, the shepherd collected the plant and gave it to his sheep whenever they were bitten by snakes, and when the town of Orvieto was struck by plague, he used his herb on humans and "chased away the infection."[16] Word of his success travelled, and the shepherd found himself invited to Venice, where he likewise saved the city from the plague, after which they offered him "the treasure of Saint Mark" in exchange for his secret. He refused, saying that his secret was worth more than all the treasure in the world, and that he would rather use it charitably. He then travelled to Naples, which he likewise saved from the plague, but after spending some time there grew nostalgic for his old way of life and decided to return to his sheep, and so taught his secret to a physician in Rome. This physician, La Martinière tells us, is never named, but all the *orviétan* vendors claim some relation to him, a fact which, he points out sardonically, tends to discredit the whole legend:

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royale" in 1664, availing himself of the privilege to practice in Paris, during which time he published most of his writings, including various travel narratives and works of medical popularisation.

[15] On this origin myth see also Gentilcore, *Healers and Healing*, 96–97. The myth draws on several established tropes, namely, learning from animals; and using the hermit shepherd as a critic of the established order.

[16] La Martinière, *Traitté des compositions du mitridat, du thériaque, de l'orviétan*, 27.

> One claims to be the grandson of this physician, another says the physician was his great-grandfather, another claims he was the grandfather of his father-in-law, and that in the lineage of this father-in-law, he was the only one to inherit the secret, getting it through marriage to his wife; and almost all of these operators say something similar, to such an extent that, to take them at their word, this Orviétanalized physician deflowered more women than Hercules to have so many bastards, for they all carry different names, and while they claim to be grandsons of this physician, not a single one claims, however, to be related to the shepherd, which demonstrates the story is a mere fable.[17]

So much for the legend of *orviétan*. The real story, according to La Martinière, is the one he learned from several credible acquaintances while in Rome. This version begins in 1560, at the time of Pope Paul IV,[18] when there was a cardinal in Rome, a native of Piacenza (*Plaisance*) named Deodaté, "homme fort curieux et possesseur de quantité de beaux secrets," who was saved from a serious illness by his apothecary Guerche Martin of Ferrara. The cardinal rewarded Guerche by disclosing to him the secret of one of his antidotes, which subsequently made him rich and famous. He called his composition "Anitan" which, according to La Martinière, means "Antidote du temps." Guerche had two apprentice apothecaries in his boutique that were from Orvieto, one named Gregoire and the other Orassio Tavanty, who, after the death of Guerche, continued to sell their master's remedy. This pair in turn hired an apprentice named Girolamo Ferranti (Hierosme Ferenty), who had two assistants, one named Desiderio Descombes, who was French, and the other Jean Vitrario, who was Italian. He taught his secret to both, and Descombes brought it to France in 1608, while Ferranti stayed in Rome, married his

[17] "L'un dit estre le petit fils de ce Medecin, l'autre dit que ce Medecin estoit son grand bysayeul, l'autre dit, que ce Medecin estoit le pere-grand de son beau-pere, et que sa lignée de cedit beau-père, il n'y a que luy seul qui a herité de ce Secret, l'ayant eu pour mariage de sa femme; et presque tous les Operateurs en disent de mesme, tellement qu'à les entendre, il faut que ce Medecin Orvietanalizé aye dépucelé plus de femelles que n'a jamais fait Hercule pour avoir tant de bâtards, car tous portent differns noms, et si toutesfois ils ne laissent de se dire, petits fils de ce mesme Medecin : car quant au Berger, nul ne se dit estre de sa parenté, ce qui fait connoistre que cette histoire n'est qu'une fable," Ibid., 29–30.

[18] Catalani and Console point out that Paul IV died in 1559, making this date anachronistic.

master's servant girl and had a daughter by her named Claire. According to La Martinière, Claire was then married to Chrisophe Contugi, and the secret of the *orviétan*—which Ferenty had renamed in honour of the hometown of his masters—was given to him as dowry. Contugi and his wife then moved to France themselves, where he gained fame in the theater by portraying the character Spacamont and was later granted an exclusive privilege by the king to sell his *orviétan* throughout France.[19]

La Martinière's account thus provides a convoluted chain of transmission by which the *orviétan* secret originates with a cardinal, is transmitted through successive generations of apothecaries in Rome, changes names from *anitan* to *orviétan*, and then branches into distinct traditions in the early seventeenth century, with Descombes bringing it to France while Ferranti remains in Italy—only to marry his daughter "Claire" off to Contugi, thus creating a second lineage of French *orviétan* charlatans.

The sixteenth-century origins and lineage of *orviétan* lies beyond the scope of this account, but all of the seventeenth century players La Martinière mentions—Ferranti, Descombes, Vitrario, and "Claire"—can be corroborated by other sources, although his account garbles some of their relations.[20] Interestingly, as we shall see, the key to sorting out La Martinière's confusion lies in the fact that the "Claire" he mentions—who is almost certainly Christophe Contugi's wife Clarice (sometimes Clarisse), mentioned in numerous other documents—was twice widowed, and apparently transmitted the secret of *orviétan* to three consecutive husbands.

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[19] La Martinière, *Traitté des compositions du mitridat, du thériaque, de l'orviétan*, 30–33; see also the account in Gentilcore, *Healers and Healing*, 98–99, which differs on some details, and makes Ferranti himself the first *orviétan* charlatan, Hieronymo, on the Pont Neuf in 1610.

[20] This is not the only story that turns up in garbled version in La Martinière: as we shall see in section 3, the account he provides of the battle between the "Narbonne" vs. "Toulouse" *orviétan* charlatans is certainly a confused retelling of the 1656 Contugi-Polony conflict in Toulouse. While Le Paulmier and Planchon appear not to have been aware of La Martinière's *Traitté des compositions*, it is cited by Catellani and Console.

Although Le Paulmier was not aware of La Martinière's account, he did nonetheless assemble details about these various players. Descombes, the French apothecary who La Martinière alleges apprenticed in Rome with Ferranti, is certainly the same Desiderio Descombes of Angoumois who was named "Operateur et distillateur ordinaire du Roi" and given the first letters patent to sell *orviétan* in Paris on 19 December 1625.[21] For the relation between Ferranti, Vitrario, and Clarice, the key source is a 1657 *arrêt* from the royal Conseil privé, the preamble of which establishes the lineage by which *orviétan* was transmitted down to Christophe Contugi: Contugi was "native of Rome, true *Orviétan*, husband of Clarice Vitraria, sole and unique inheritor of Jean Vitrario, physician, who married Clarice widow of Hierosme Fioranti, the first to be called *l'Orviétan*." Following this account, Clarice was the *wife* of Hieronymo Ferranti, not his daughter, as La Martinière supposes; and she was twice widowed; her second marriage being to Jean Vitrario.[22] Her third marriage to Chrisophe Contugi, likely at an advanced age, transmitted the *orviétan* secret to him. This much is also confirmed by Le Paulmier via the couple's naturalisation letters, granted to "Christophe Contugi, dit l'Orvietan, et Clarisse Vitraria, romains de naissance" on October 21, 1646.[23] The couple was already married at this point, and six months later, on April 9, 1647, Contugi secured

[21] On Descombes see Le Paulmier, *L'Orviétan*, 16–20. Descombes privileges were dispatched by the Grand Conseil, and have survived in its registers: see AN $V^5$ 1230, fol. 94-95 (19 December 1625); they are also reproduced in Le Paulmier, *L'Orviétan* 123-125.

[22] For a reference to a chapbook advertising the medicines of one Giovanni Vitrario, "il Tramontano," "surgeon and distiller in Rome in the Piazza Navon, at the sign of the phoenix," see William Eamon, *Science and the Secrets of Nature: Books of Secrets in Medieval and Early Modern Culture* (Princeton, N.J.: Princeton University Press, 1994), 242. The corresponding note does not cite the work but the bibliography includes a work by Giovanni Vittario [sic], entitled *Centuria seconda de' secreti materiali, medicinal', e curiosi* (Viterbo, 1618). The same source is cited by Gentilcore, *Medical Charlatanism* 339. According to worldcat.org, the only two copies are at the BN and the Wisconsin-Madison University Library. The work is apparently a sixteen page pamphlet.

[23] Le Paulmier, *L'Orviétan*, 22. See the transcription on 128–129.

his first letters patent to sell *orviétan*.[24] As we shall see, this episode also marks the beginning of the persistent trend: the secret and privilege of *orviétan* would often be transmitted to widows and the sisters of male heirs.

Privilege in hand, Christophe Contugi would go on to sell *orviétan* on the Pont Neuf and elsewhere for over thirty years and fight a number of legal battles to preserve his exclusive privilege. He died on the night of the July 9, 1681, in comfortable circumstance as an honourable *bourgeois* of Paris, if we are to take the word of the Faculty doctor Jean Bernier, usually implacably hostile in his writings to charlatans and empirics.[25] But what about the fate of the *orviétan* widow, Clarice, who made the whole business possible and ensured the wealth of the Contugi family for another three generations after Christophe's death? Her marriage with Contugi appears to have been childless, and Le Paulmier conjectures that she was still alive in 1658 but had certainly passed away by the September 9, 1659. On that date, Contugi married a young actress from his troupe, Roberte Richard, who played the role of Florinde in their theater skits.[26] The first of Christophe's fourteen children with Roberte was born six months after they were married.[27] Two decades later, she too would find herself widowed, but the privilege and secret of *orviétan* would pass to her eldest son, Louis Anne.

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[24] I have not been able to locate a copy of the initial 1647 letters, although it seems likely that they would include the same provisions as the later renewed versions. If the letters were dispatched from the Secretary of State for the Royal House, (Series $O^1$), then they are probably lost, as dispatch registers survive only from 1669 onward.

[25] Le Paulmier, *L'Orviétan*, 48; Jean Bernier, *Supplémens au livre des Essais de Medecine: Avec des Corrections, et des Observations necessaire pour lire cét Ouvrage avec utilité et plaisir.* (Paris: Simon Langronne, 1691), 75.

[26] Opposite Contugi's Capitaine Spacamont, according to Bernier; Spacamont, as we shall see, is also the name used by Polony to deride Contugi. See below, sect. 3.

[27] Le Paulmier, *L'Orviétan*, 43–44.

*2. The Paris Faculty orviétan endorsement scandal, 1648*

On November 27, 1648, in the midst of the Fronde, the charlatan Christophe Contugi visited Jean Piètre, the newly elected dean of the University of Paris Faculty of Medicine at his home. The charlatan, who was accompanied by a clerk or *huissier* (*servus scribae*), presented the dean with a small box of medicine and asked him to assess whether or not it was safe. Piètre, no doubt surprised by the visit, reports in the Faculty *Commentaries* that he told the two men that he would need time to examine the substance before passing judgement.[28]

The dean records that Contugi returned a few days later, on December 1, to learn what he had decided. By the authority of the king, Contugi explained, he sold a certain antidote called *orviétan*—"which is great in neither name nor utility," the dean commented—and the medicine he had brought to the dean was a counterfeit of it, produced by his "ape," Carmeline, another charlatan. Carmeline had been caught in this deception, and, being ignorant of the true composition of the antidote, he had prepared a false one which had led to many deaths. The dean responded, with perhaps a touch of sarcasm, by asking why Contugi had not come to seek the support of the faculty sooner if his own antidote was so salutary. Contugi eagerly and (in retrospect naively) replied that he had, in fact, come to former dean, Jacques Perreau, a few months earlier, seeking letters of recommendation for his remedy, but he had been rebuffed. And so, he admitted

[28] BIUS Médecine, Ms. 13, Commentaires de la Faculté de médecine de Paris, vol. 13 (1636-1652), fol. ccclxxix (385) r° (November 27, 1648). NB: pages of this volume of the Commentaires are numbered twice, first in black ink in roman numerals, which older references always follow, but also in more recent pink Arabic numerals. Because secondary sources are divided in which numbering system they follow, I provide both here, i.e. fol. ccclxxix r° (black ink) = fol. 385 r° (pink ink).

The events recounted in this section are also described in lesser detail in Le Paulmier, *L'Orviétan* 23-26, though he did not have access to the actual notarized attestation, which I was able to find thanks to Gerard Jubert's work on Théophraste Renaudot, whose son Eusèbe happens to be one of its signatories: see Gérard Jubert, ed., *Théophraste Renaudot (1586-1653) : Père des journalistes et médecin des pauvres* (Paris: CHAN / Editions Champion, 2005), 537–539.

to the dean, that "on the advice of that great man, his good friend the Doctor de Gorris,[29] he contented himself with buying, at no great price, certain letters of recommendation from twelve doctors, illustrious men, and a certain broker of the whole business made 300 *livres* for himself."[30] Here Piètre, reporting the conversation in the *Commentaries*, confesses that he was horrified (*exhorruit*) by this story, but dissimulated in order to learn which of the Faculty doctors had so disgraced themselves. Eager to impress the dean, Contugi produced all of his credentials, which he regularly carried on his person in order to convince sceptics, including his letters patent from the king and the recommendations from the twelve doctors, which were signed and sealed by public notaries. The dean shrewdly accepted all of these letters, dismissed Contugi, and told him again that he would carefully consider the matter.

On December 4, the dean exposed eleven doctors (the twelfth "doctor," it turns out, was merely a licentiate) at a meeting of the Faculty, reading their letters of recommendation to the assembled regent doctors, declaring that they had violated the good faith given to them as doctors, not to mention their solemn oaths. The Faculty censor Quentin Thevenyn asked that they be allowed to publicly defend themselves, but the dean observed that their opinions were already clear in the notarized document, and so the eleven doctors were obliged to wait in a vestibule (*vestibulum*) while the

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[29] On De Gorris see Laure Jestaz ed. Guy Patin, *Les lettres de Guy Patin à Charles Spon, janvier 1649 - février 1655* (Paris: Honoré Champion, 2006), 658n3. This Jean des Gorris (d. 1662) was the third Paris doctor of that name; he edited the *Definitiones medicae* of his grandfather, a former dean of the Faculty. The *Discours de l'origine, des moeurs, fraudes, et impostures des ciarlatans* is attributed to him by Barbier (see the reprint in the 1868 *Oeuvres completes de Tabarin*, vol. 2, 231-288), but this seems to me very unlikely given his role in the *orviétan* endorsement scandal; Quérard attributes this book to one Jean Duret.

[30] "tunc iste, se conatum fuisse litteras commendatitias obtinere a Priore Decano M. Jacobo Perreau; quia non potuerit, consilio magni hominis D. Desgorris sibi amicissimi, contentum fuisse emere quasdam litteras commendatitias a duodecim doctoribus viris clarisimis non maximo pretio, unum aliquem totius negotii redemptorem trecentis libellis rem sibi confecisse," Ibid., fol. ccclxxix (385) v°–ccclxxx (386) r° (1 December 1648).

assembled faculty decided their fate. As Piètre reports in the *Commentaries*, the regent doctors unanimously ruled that the eleven doctors were guilty of violating their oaths and would only be pardoned on the condition that they published a notarized recantation of their support for *orviétan*. The licentiate would be scolded and warned before the dean and the whole Faculty during his doctoral examinations.[31] Piètre observes in the *Commentaires* that all of the accused recanted within a few days. On December 5, the day after the faculty meeting, a man sent by Contugi came to the dean's home to recover his letters patent. As Piètre tells it, he chased the man away, and told him that royal letters meant nothing without the approval of the faculty.[32]

A second account of these events, peppered with commentary and invective, can be found in a letter written five years later (January 6, 1654) by none other than the famous Faculty doctor (and acerbic wit) Guy Patin, to his friend, the Lyonnais doctor André Falconet. Patin's account is not entirely corroborated by that from the *Commentaires* and the actual documents: he dates the events to 1647, when in fact they happened in 1648, and his list of the accused is only partially accurate.[33] These errors can probably be attributed to the vagaries of memory or partiality: Laure Jestaz, the editor of Patin's letters, has observed that several of the names he adds were personal enemies. But what is really interesting is Patin's estimation of the motives of Jean de Gorris, who in all versions appears as a friend of Contugi and the architect of the whole project:

> All his life De Gorris has been on the wrong side: the chymists, the charlatans, the gazetteer [Théophraste Renaudot], foreigners, folks with

[31] Ibid. fol. ccclxxx (386) v°–ccclxxxi (387) r° (4 December 1648).
[32] Ibid. fol. ccclxxxi (387) r°–v° (5 December 1648).
[33] Only eight of the names Patin provides are corroborated by the actual documents (Des Gorris, Des Fourgeais, Renaudot, Lesoubz, Chartier, Rainssant, and Mauvillain); instead of Allain, the two Guerins, and de Launay, whose names appear on the notarized recommendation and its recantation, he names four other doctors: Guenaut, Beaurains, Pijart, and Cledat.

> secrets against gout, epilepsy, quartan fever; he was curious to know preparations of laudanum, antimony, and vitriol. A very unsuccessful practitioner, who killed a good many with his experiments, which saw his practice reduced [...] It isn't his fault, it's his custom. He is a man hungry for money and secrets. If a child, a monk, a woman, a charlatan tells him of some secret, he will adhere to them. He is a pathetic man, with less spirit than a beast, who does and tolerates even in his home many things which a man of spirit would never tolerate.[34]

Knowing which other doctors were "hungry for cash," de Gorris, already a friend of Contugi's, undertook to have the recommendation signed. He and his fellow accused emerge from Pièrre's *Commentaire* entries and Patin's letter as credulous fools, impoverished and desperate. We hear almost nothing of the voices of the accused in either source—indeed, the *Commentaires* show that they were not even given a hearing before their peers. But how might they have defended their actions? What motives did they have beyond credulity and venality? And what did their recommendation say in the first place?

The notarized recommendation itself has survived, and offers some answers to these questions, allowing for a more balanced understanding of the events of the fall of 1648.[35] Dated September 16, 1648, the recommendation begins with a lengthy preamble on the history of medicine, citing the example of wise men throughout the ages who have contributed new medicines that cure even the most desperate of illnesses, for instance the theriac of Andromachus, mithridatium, philonium, and the syrup of king Sabor. The letter

[34] "Le sieur de Gorris a toute sa vie esté du mauvais parti : des chymistes, des charlatans, du gazetteer, des estrangers, gens de secrets contre la goutte, l'epilepsie, la fievre quarte, et dans une curiosité de sçavoir des preparations du laudanum, de l'antimoine et du vitriol; très malheureux praticien, qui en a bien tué avec les experiences qu'il a voulu faire, à cause de quoy il s'est veu reduit sans pratique […]. Ce n'est point sa faute, ce n'est que sa coutume. C'est un homme affamé d'argent et de secrets. Si un enfant, un moine, une femme, un charlatan luy parlent de quelque secret, il leur adherera. C'est un pauvre homme, qui n'a tantost pas plus d'esprit qu'une beste, qui fait et qui souffre jusques en sa maison beaucoup de choses qu'un homme de cœur ne souffrira jamais," Patin, *Les lettres de Guy Patin à Charles Spon*, 1164–1166.

[35] AN MC LXXIII, 395 (September 16, 1648). Jubert, *Théophraste Renaudot*, 537–538.

goes on to place *orviétan* within this august company, and the signatories even provide a pharmacological evaluation of it. They note that it is a powder made of diverse ingredients (which are concealed, naturally) and that its occult virtue makes it an antidote to poisons, as experience has demonstrated time and again. But that it is also an opiate that is hot in the third degree (meaning that it was warming, following the Galenic classification), and thus useful against all sicknesses and distempers that arise from masses of cold, raw and pituitous humours, such as stomach colics, windy colic, paralysis, cold gouts, indigestion, and worms. These evaluations are all well in keeping with learned pharmacological categories, and the mention of occult causation harkens back to the Avicennan explanation of the action of antidotes.[36] The recommenders also offer the following experiential justification for their endorsement:

> The experience over several years in this city of Paris bears faith and testimony to the above [attestation], and, for this reason, we the undersigned have judged it unreasonable to deprive the author of our approval and consent, he having shown us several proofs and experiments.[37]

The curiosity about medical secrets and the appetite for novelty that Patin so faulted in de Gorris is implicitly defended in the letter by an appeal to the history of medical innovation. Likewise, the recommendation of *orviétan* itself is grounded in an appeal to the daily experience of its success for many years, as well as Contugi's own demonstrations before the doctors.

The 1648 *orviétan* endorsement scandal reveals at the outset a number of salient points that will recur in the subsequent history of the antidote and its vendors. First, it

[36] See above, ch. 2, sect. 1.

[37] "L'experience qui s'en est faicte en cette ville de Paris depuis plusieurs années faict foy et tesmoignage de ce que dessus. Et, pour ceste raison, nous ditz soubzsignez, n'avons pas jugé raisonnable de priver l'autheur de nostre aprobation et consentement, icelluy nous en ayant faict veoir plusieurs preuves et experiences," AN MC LXXIII, 395 (September 16, 1648).

reveals that Christophe Contugi still saw the Paris Faculty of Medicine as an important source of legitimation even though he was in possession of royal letters patent. He did not need to have any recourse to the Faculty in order to get his letters patent in the first place, but a year and a half after securing them, we find him endeavouring to secure the support of the Faculty in defending his privilege against interlopers, first through its dean directly, then through the notarized recommendation from a dozen of its doctors.

Contugi was not unique among the Paris charlatans in seeking approval of the Faculty. The *Commentaires* show that over twenty-five years earlier, on February 1, 1621, the earlier *orviétan* charlatan, Desiderio Descombes, was rebuffed by the dean at the time, Hardouin de Saint-Jacques, when he sought faculty approval for his *orviétan*. Indeed, it appears the Descombes also sought out individual regent-doctors to secure certificates from them: one of these, interestingly enough, was the future dean, Jean Piètre, then a young doctor who apparently witnessed Descombes' demonstration but refused to provide a certificate. Descombes had better luck with the provost of the Châtelet, gaining the right to sell his *orviétan* in Paris that same year, and later gaining royal letters patent in 1625—apparently thanks to the support of the queen mother, Marie de Medici.[38]

Second, it shows that Contugi's appeal to the Faculty occurred within the context of an existing legal battle with a rival vendor. Indeed, the text of the recommendation itself concludes with a denunciation of a counterfeiter, one François Narici, dit Maroquin, attesting only to the efficacy of Contugi's *orviétan*. Likewise, the notarized recantation the doctors later signed was aimed at preventing the recommendation from being used in

[38] Le Paulmier, *L'Orviétan*, 17–19. It should be noted that Descombes appears to have sought Faculty support as part of his appeal to civil and royal authorities, rather than post facto, as Contugi did. For Descombes struggles to gain legitimacy, see BIUS Médecine, Ms. 11, *Commentaires*, fol. 256-360.

court by Contugi against yet another rival, Carmeline. Far from being litigants against the charlatans, as one might expect, the Faculty doctors were perceived by the Contugi family as potential allies in their legal battles against other charlatans. This too was far from unusual: as we shall see, each of the major legal battles fought by the Contugi family from 1648 to 1735 were against rival charlatans and apothecaries, never the Paris Faculty or its doctors.

Third, the episode suggests that any statement about the institutional attitude of the Faculty toward charlatans needs to be tempered by an account of the attitudes of individual regent doctors. Eleven Faculty doctors were willing (at least initially) to endorse a charlatan with an effective remedy. The charlatan for his part was still interested in courting the Faculty, even though he had already been legitimated by royal letters patent. As later episodes in the Contugi family saga demonstrate, the boundary lines between the Faculty and the charlatans were often quite blurry. Patin's ridicule of Des Gorris's poverty can be taken to mean that impoverished doctors were more susceptible to being bribed, but it also contains the implicit suggestion that some Faculty doctors were quite willing to consult "children, monks, women, and charlatans" in order to learn new medical secrets.

*3. The sign of the sun in the provinces: Competing orviétans, 1656-1657*

In the spring of 1656, nearly a decade after his tangle with the Faculty, Christophe Contugi found himself being sued by three rival charlatans—Gilles Barry, François Fossa, and Chrisophe Polony—in courts at three different corners of France—the Parlements of Paris, Bordeaux, and Toulouse. Presented with such a challenge, Contugi availed himself of the rights of his royal privilege and drew recourse to the highest court

in France, the royal Conseil privé, where his letters were registered. The problem, as he presented it in his request, was a simple one: he could hardly stand before judges in three different places at once, nor was it realistic that he be expected to convey the original documents necessary for his defence to each of the courts. All three lawsuits surrounded the defense of his royally mandated exclusive privilege to sell *orviétan*, not just in Paris but throughout the kingdom of France—including both the right to the name of the drug itself and the right to sell it under the sign and mark of the Sun, "which the plaintiff has always used to establish the difference between his own antidote and that of others."[39] Because each lawsuit dealt with the same question, Contugi requested that all three cases be brought together before the Conseil privé. In legal terms, the solution he sought was an *évocation*—the transferral of cases from inferior courts to a higher one—that would decide all three lawsuits in one fell swoop.[40] On May 19, 1656, the Conseil privé, then presided over by the Chancellor of France, Pierre Séguier, recognized Contugi's 1647 letters patent as well as the *arrêts* he had already obtained in his favour at the three parlements 1655 and 1656 and accepted his request. The parties of all three cases were to

[39] "Qui a tousjours servy au supplicant pour establir la différence de son antidote d'avecq les autres," AN V$^6$ 324, Conseil privé, Minutes d'arrêt, May 19, 1656. Cf. Le Paulmier, *L'Orviétan*, 130–132.

[40] On the Conseil privé, see Bernard Barbiche, *Les institutions de la monarchie française à l'époque moderne (XVIe - XVIIIe siècle)* (Paris: Presses Universitaires de France, 2012), 289–290, 298–299; and the more specialized study of Albert Hamscher, *Conseil Privé and the Parlements in the Age of Louis XIV: A Study in French Absolutism* (American Philosophical Society, 2007).

The Conseil privé was the judicial section of the royal Grand conseil, and served for all practical purposes as the court of last resort in France. Although it was theoretically an organ of the king's prerogative to judge as the ultimate source of justice in the kingdom—his *justice retenue*, in the sense of it being the judicial power he retained rather than delegated to the courts. The Conseil privé rarely sat in the presence of the king personally and for practical purposes was a council of masters of requests overseen by the Chancellor of France. Most of the cases that came before it were civil suits between persons. The *évocation* of cases from inferior jurisdictions, which will play an important role in section 3 of this chapter, was one of its three major forms of action, alongside *cassation* (the nullification of *arrêts* from lower courts that violated royal or private law), and *règlement de juges* (the adjudication of disputes over court jurisdictions).

be summoned, and the pending lawsuits at the parlements would be suspended until the Conseil privé passed judgement.[41]

We know very little about how Contugi's cases against Gilles Barry and François Fossa proceeded, but a surprising number of documents have survived surrounding his dispute with Christophe Polony, the rival charlatan from the Languedoc. We know, for instance, that the following month, on June 27, 1656, Contugi brought another complaint against Polony to the Conseil privé. There he established that following the May 19 *évocation*, he had been careful to inform Polony and the Toulouse Parlement that the case had been reassigned to the Conseil privé. In spite of this, however, he tells the Conseil that Polony has not dropped his lawsuit in Toulouse and, in fact, that he secured one *arrêt* from the provincial Parlement on June 1, permitting him to sell his *orviétan*; and a second *arrêt* on June 10, returning to him his "tableau" (assumedly a backdrop or set-piece) and "the sign of the Sun," which had apparently been seized by the court pending the trial's outcome. These *arrêts* could not stand, Contugi argued, because they had been made in prejudice of the May 19 *évocation* of the case to the Conseil privé, and against his own royal letters patent, which gave him the right to sell *orviétan* throughout France under the mark of the Sun, to the exclusion of all others unless they had secured his permission. The court ordered that his request be appended to the subsequent proceedings, and that in the meantime the execution of two *arrêts* in favour of Polony be suspended pending the settlement of the case by the Conseil privé.[42]

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[41] AN $V^6$ 324, Conseil privé, Minutes d'arrêt, May 19, 1656. Cf. Le Paulmier, *L'Orviétan*, 130-132.

[42] AN $V^6$ 326, Conseil privé, Minutes d'arrêt, June 27, 1657. Cf. Le Paulmier, *L'Orviétan*, 132–134.

A third *arrêt* from over six months later demonstrates that in spite of this action Polony was still pursuing his case at the Parlement in Toulouse, this time in order to defend his own monopoly on *orviétan* and the sign of the Sun against two new interlopers, Boyer Saint-André and La Fortune. Contugi again requested that the *arrêts* of the Toulouse Parlement in favour of Polony be nullified; the Conseil judged that both parties in the case were to be heard, and that Polony was prohibited from taking any further legal action in Toulouse, under penalty of nullity, a sizable three thousand *livre* fine, as well as expenses and damages. The new *arrêts* he secured were suspended from execution, and Polony was summoned to appear before a *commissaire* in Montauban, who was to interrogate him and then report back to the Conseil.[43]

These three *arrêts* testify to a common phenomenon in pluralistic judicial contexts, what Lauren Benton has called "forum shopping," wherein litigants jockey with one another to find the most advantageous forum for their dispute, pitting one tribunal against another.[44] They also raise a number of questions: Why did Contugi want to move the case from Toulouse to the Conseil privé? Conversely, how was Polony so successful in securing the support of the Toulouse Parlement, and why did he fight so hard to keep the case within the jurisdiction of that court? And finally, what had Contugi been doing in the Languedoc in the first place? As we shall see, the Polony-Contugi debate provides a fascinating case study of the mechanisms of medical legitimation in action, raising questions about jurisdictional conflict, the extent of exclusive medical privileges, and the role of live poison trials in arbitrating disputes. It also provides a window into inter-

[43] AN $V^6$ 338, Conseil privé, Minutes d'arrêt, January 12, 1657. Cf. Le Paulmier, *L'Orviétan*, 135–137.

[44] Lauren A. Benton, *Law and Colonial Cultures Legal Regimes in World History, 1400-1900* (Cambridge: Cambridge University Press, 2002), 106, 137.

charlatan disputes and raises the important but little-discussed question of branding in early proprietary remedies.[45]

Despite Christophe Contugi's efforts, Polony continued to take legal action through the Toulouse Parlement well into 1657, and presented a request of his own to the Conseil privé only on May 12, 1657.[46] It was at this time that he provided the Conseil with his credentials as well as his own version of the events in Toulouse, alongside his request that the case be returned to the jurisdiction of the Parlement there. This account is corroborated and much expanded by a printed account of the conflict: the provocatively titled *Factum poétique pour Christophe Polony, vray Orvietan de Rome, contre Contugi Spacamont, Bateleur* (an acrobat or juggler).[47] This long text, written in verse, contains not only an account of the major events in the Contugi-Polony conflict at Toulouse, but also spoof versions of supporting "documents," such as a parliamentary *arrêt* and a medical attestation, likewise presented in verse. Although it is obviously a satirical source written to provoke laughter, most of the facts it provides are corroborated (albeit in less detail) by Polony's 12 May request to the Conseil privé.

As Polony describes it in his request, he inherited the secret of *orviétan* from his forefathers and first dispensed it in Rome. After many successful cures there, he was granted the approval of the University, the Hospital of Santo Spirito, and the first

[45] Branding and trademarking remain neglected topics in early modern medicine: for a recent discussion, see Alisha Rankin's work on the *terra sigilata*: Alisha Rankin, "Empirics, Physicians, and Wonder Drugs in Early Modern Germany: The Case of the Panacea Amwaldina," *Early Science and Medicine* 14, no. 6 (2009): 680–710; Alisha Rankin, "Authenticity, Alchemy, and 'Earth' in Early Modern Pharmacy" (History of Science Society Conference, Boston, 2013), unpublished conference paper; for a survey of French branding from this period, see the series of notices by Maurice Bouvet, "Sur l'historique du conditionnement de la spécialité pharmaceutique," *Revue des spécialités*, 1928, 101–43, 213–23, 297–315.

[46] AN $V^6$ 345, Conseil privé, Minutes d'arrêt, May 12, 1657.

[47] *Factum poétique pour Christophe Polony, vray Orvietan de Rome. Contre Contugi Spacamont, Bateleur* (s.l. [Toulouse?]: s.n., ca. 1656). This printed parody of a legal factum (a brief summarizing the main points of a lawsuit) contains a long poem of 470 lines, arranged in ten-verse stanzas following a rhyme pattern of ababccdede, and is followed by seven short epigrams, the last of which is in Occitan.

physician of the pope. Having heard of how welcoming the kingdom of France was to useful inventions in art and science, he resolved to go there, travelling through Languedoc in 1654. He alleges that he had many opportunities to prove the virtue of his antidote there, and that he was so successful that word of his cures reached the Estates of Languedoc, then meeting in Montpellier, and he was summoned to provide a trial of his antidote before the assembly. His trial was a success, and he was presented by the estates with a golden chain and medallion, having the figure of the king on one side, and the arms of the province on the other: "the said Estates dispatched an attestation following the most authentic forms, and beseeched him to stop in the said province to help fight the contagion that manifested itself in those places."[48] The *Factum poetique* provides an account of the trial by which he gained the medallion:

| | |
|---|---|
| Les trois Estats a Montpellier, | The Three Estates at Montpellier, |
| Et les Docteurs en Medecine, | And the Doctors of Medicine |
| Firent piler dans un mortier, | Had ground in a mortar, |
| D'un Poison couleur Christalline, | A cristal-coloured poison, |
| Mon corps estoit tout enflammé | My body all enflamed, |
| De l'Arsenic et Sublimé, | By Arsenic and Sublimate, |
| Qu'ils me firent prendre en un verre, | That they had me take in a glass, |
| Lors qu'ils crurent que j'estois mort, | Once they believed I was dead, |
| Parce que je tombé par terre, | Because I had fallen on the ground, |
| Mon secret me guerit d'abort.[49] | My secret cured me thus. |

The *Factum* also adds that Polony had certificates from several lords, notably from "Monsieur le Prince de Conty."[50] Armand de Bourbon, Prince of Conti (1629-1666) was one of the leaders of the Fronde, and was then only recently back in the good graces of Louis XIV, having been delegated to open the Estates of Languedoc. Polony's *orviétan*

[48] "…lesdits Estats luy auroient fait expédier une attestatoire en la plus authetique forme, et l'auroient prié de vouloir arrester dans ladite province pour la secourir contre la contagion quy se reveloit en divers lieux," AN $V^6$ 345, Conseil privé, Minutes d'arrêt, May 12, 1657.

[49] *Factum poétique*, 4.

[50] Ibid., 5.

trial may have been part of the entertainment at Montpellier surrounding the Estates: Molière's theater troupe was also present, and was also supported by Conti.[51]

With the support of the estates, Polony then began to visit the principal towns of the province in order to dispense his *orviétan*, but when he came to Toulouse, he encountered Christophe Contugi, "who claimed to be the true *orviétan* and sold his drugs under his name and mark," all by virtue of an *arrêt* he had obtained there on January 8, 1656, before Polony had arrived from Montpellier to defend his rights.[52] The *Factum poetique* alleges that Contugi had already been there for six months, and sought to secure an *arrêt* approving his *orviétan* before leaving. At this time Contugi presented the Parlement with his royal letters patent and claims to have received the secret of *orviétan* as a dowry for marrying the daughter of its Roman inventor.[53]

According to the *Factum*, Polony was in Montpellier at the time of these events. When he learned of Contugi's attempts to receive the endorsement of the Parlement, however, he made his way back to Toulouse without delay to sue him. Upon receiving the court summons, Contugi fled from Toulouse to Carcassonne, but was pursued there by Polony. Contugi initially planned to murder Polony when he arrived in Carcassonne, or so the *Factum* alleges, but in the end decided to return to Toulouse and fight him in the courts, expecting that he could wear Polony down by dragging the affair onward interminably: Contugi, the *Factum* tells us, was an expert "chicaneur" (pettifogger) in the

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[51] William Beik, *Absolutism and Society in Seventeenth-Century France: State Power and Provincial Aristocracy in Languedoc* (Cambridge: Cambridge University Press, 1985), 113, 321; Virginia Scott, *Molière: A Theatrical Life* (Cambridge: Cambridge University Press, 2000), 78; C. E. J. Caldicott, "Les séjours de Molière en Languedoc," *Revue d'Histoire littéraire de la France* 87, no. 6 (1987): 994–1014.

[52] AN $V^6$ 345, Conseil privé, Minutes d'arrêt, May 12, 1657.

[53] *Factum poétique*, 2. Note the confusion about the relationship between Contugi and Clarice: here, as in La Martinière, Clarice is described as the daughter, not the widow, of Vitrario, the supposed inventor of *orviétan*.

courts. But here again Polony got the better of him: he proposed that the dispute could be settled by a trial of their respective antidotes, and on March 14 1656 the Parlement called for such a trial to occur within a month, under the supervision of a commissioner delegated to the affair by the Parlement and in consultation with members of the local medical community (two doctors, as well as surgeons and apothecaries). Pending judgement, it would be Contugi—not Polony—that was permitted to continue selling *orviétan*.[54]

According to the *Factum*, Contugi was surprised by this gambit (which would allow him little latitude in stretching out the case) and found himself in a pinch, so he protested that it was unjust. Polony also protested, but for entirely different reasons: the *arrêt* ordered the subjects of the trial were to be "whatever animals were most suitable," while Polony was so confident in his own *orviétan* that he would rather have his and Contugi's own bodies serve as trial subjects. They could both drink the same poison and then ingest their respective antidotes—a high-stakes poison trial that Polony no doubt hoped would dispense with Contugi once and for all.[55]

As the *Factum* tells it, the test occurred before the town hall, where a crowd assembled "as if for a fair." The doctor Laurens Ferrier served as commissioner for the Parlement, sitting at the head of a medical "consistoire" of three other doctors, named Purpan, Riordan, and Famus. Three pigs were brought: one for Contugi, one for Polony, and a third as a control to ensure the poison was effective. Contugi used a pair of scissors to cut his pigs ear in order that it be clearly distinguishable from the others, while Polony "avec beaucoup moins d'avarice," simply tied a ribbon to the thigh of the pig he was

[54] Ibid., 7–8.
[55] Ibid., 8.

assigned. The poison, apparently arsenic, was fed to each of the pigs, after which, the two marked pigs were made to swallow the respective antidotes of Contugi and Polony, mixed with water. The three were then brought to separate stalls, where they were to be kept overnight. In the meantime, Polony, ever the showman, made use of the assembled crowd for a trial of his own:

| | |
|---|---|
| Polony fit encore plus, | Polony did better: |
| Quoy que c'est Arrest ne l'ordonne, | Although the *arrêt* hadn't ordered it, |
| Pour rendre Contugi confus, | to vex Contugi |
| Il fist l'essay sur sa personne, | he made a trial on his own person |
| Et sans peur de la guerison, | and without fretting over recovery |
| Il remplit son corps de poison, | he filled his own body with poison |
| De la main d'un Apotiquaire, | from the hand of an apothecary |
| Quand tout le monde le crut mort, | when everyone thought him dead, |
| Et mèmement son adversaire, | even his adversary, |
| Son secret le guerit d'abort. | his secret immediately cured him. |

It is unclear if Polony ingested the same poison as was used on the pigs.

The next morning, only one pig was found alive, leaping in hunger: Polony's. The versified "report" of the commissioner, Ferrier, made on the 6 May 1656, describes their reactions:

| | |
|---|---|
| Contugi fut le premier, | Contugi was the first, |
| Qui se fourra dans ces chambrettes, | to force his way into the stalls, |
| Et dit qu'il ne pouvoit nier, | and said he could not deny, |
| La funeste mort de sa beste, | the gruesome death of his beast; |
| Et le manteau dessus le nés, | and with his coat above his nose, |
| Qui luy couvroit la face, | covering his face, |
| Grimassant comme les damnés, | wincing like the damned, |
| Pleuroit sa perte et sa disgrace | he cried of his loss and his disgrace. |

When Ferrier opens the door to Polony's pig, hoverer, he reports:

| | |
|---|---|
| Je ne trouve donc qu'un pourceau, | Thus I found but one pig, |
| Avec un ruban à la cuisse, | with a ribbon on its thigh, |
| Qui cherchoit du som et de l'eau, | looking for some meal and water |
| Qu'on luy donna sans avarice, | which we gave to it unbegrudgingly, |
| Lors Polony sans regarder, | while Polony without regard [for cost] |
| La fit soigneusement garder, | had it carefully looked after, |

| | |
|---|---|
| Puis qu'elle faisoit sa conqueste, | because it had made his conquest, |
| Car sortant de cette prison, | for upon leaving that prison, |
| Elle faiosoit mille gambades, | she made a thousand gambols, |
| et sembloit avec raison, | and seemed, with good cause, |
| Se mocquer de ses camarades.[56] | to mock her comrades. |

The other doctors provided Polony with an attestation as well, and the Parlement pronounced an *arrêt* in his favour, allowing him to sell his *orviétan*.

| | |
|---|---|
| Cependant dans ce mesme jour, | Nonetheless that same day, |
| Contugi tout plein d'artifice, | Contugi full of trickery, |
| Pour faire interdire la Cour, | In order to interdict the court |
| Il court, a une autre Justice, | he ran to another judge, |
| Ne pouvant gouster le sommeil, | unable to get a wink of sleep, |
| Sans un Arrest du grand Conseil, | without an *arrêt* from the Grand conseil |
| Contre cette Cour Souveraine, | against this sovereign court. |
| Il eut avec illusion, | He gained it through deceptions, |
| A force se soing et de peine, | by force of care and effort, |
| Un Arrest d'interdiction.[57] | an *arrêt d'interdiction*. |

Contugi, meanwhile, retreated to a local *cabaret*, where he was accosted by the "menu peuple" of Toulouse, who accused him of selling them false *orviétan* and chased him to his lodgings, demanding refunds. Contugi closed the door behind him, and addressed the crowd from a window on high, swearing on his own name, that it was beyond his power to provide them with anything. He then fled by night, and his troupe left town. As the *Factum* tells it, when Polony learned of Contugi's flight and his plan to contest the *arrêt*, he left Toulouse in pursuit, vowing to chase him out of France just as he had chased him out of the Languedoc.

Polony appears in fact to have continued pressing his advantage before the Toulouse Parlement for some time, but after the *évocation* and repeated *arrêts*, he could no longer ignore Contugi's successful requests before the Conseil privé, and so made a request of his own before that court, including his version of events in Toulouse, leading

[56] Ibid., 13.
[57] Ibid., 14–15.

to a new *arrêt* on May 12, 1657. His account corresponds fact for fact with that provided in the *Factum poetique*: in order to settle the dispute that had arisen between himself and Contugi over who held the true secret to *orviétan*, he proposed to the judges that he and Contugi put their remedies to the test, and the judges agreed. A poison trial was undertaken on pigs, and only Polony's survived; faced with such a clear failure, Contugi sought to challenge the Toulouse judgement on his own turf at the royal Conseil privé. The *arrêt* specifies that Polony's account was substantiated by the report of the medical commission in Toulouse, which was included among the documents provided to the court, along with the attestation of Polony's *orviétan* provided by the Estates of Languedoc and his conspicuous medallion. Having reviewed this evidence, the Conseil privé ordered that the case be returned to the jurisdiction of the Parlement of Toulouse, and prohibited both Polony and Contugi from appealing the case before the Conseil privé again, under penalty of a 1,500 *livre* fine.[58]

This marks a sudden—but, as we shall see, not very long-lasting—change of events. Previously, Contugi had regained the upper hand by moving the lawsuits to his court of choice and appealing the Toulouse *arrêts* favorable to Polony. Polony had succeeded in shifting the legal battlefield back to Toulouse, but his victory would be short lived. Two weeks later, on May 23, 1657, Contugi made a new request at the Conseil re-establishing the question of his exclusive royal privilege to sell *orviétan* throughout the kingdom of France "under the sign of the Sun" as the central issue of the case. Surprisingly, the Conseil backtracked on its own decision, ordering the case to be returned to its jurisdiction.[59]

[58] Ibid.
[59] AN $V^6$ 346, Conseil privé, Minutes d'arrêt, May 25 1657.

How to explain this flip-flopping at the Conseil privé? The documents provide some hints. First, the pro-Polony arrêt appears to have been made without having consulted all of the previous *arrêts* and evidence presented during the case (letters patent, attestations, reports): it listed only the new documents brought by Polony as "seen." Second, there is also a difference in the signatures below the *arrêts*: while three of the four previous arrêts had been signed by Seguier (the Chancellor) and Faviez, the case reporter (*rapporteur*) for the Conseil, the new one in Polony's favour bears the signature of a different reporter, Amelot de Bisseuil. Third, the *arrêt* which overturned it and returned the case to the jurisdiction of the Conseil was signed once again by Seguier and Faviez, and refers to all of the aforementioned documents.[60] I suspect that Polony's request was assigned to De Bisseuil, and by either accident or design made it through the review of a *bureaux* and went before the Conseil itself without being recognized as related to the earlier case from the Contugi request, which was reported by Faviez. The oversight may have been only recognized when Contugi himself received word of the *arrêt* from a *huissier*, and then complained to Faviez.

What was the final outcome of the conflict between Contugi and Polony? A subsequent *arrêt* from eight months later (February 1, 1658) assigns the case to a

[60] On the procedure of the Conseil privé, see Hamscher, *Conseil Privé and the Parlements*, 80–107. In its most basic outline, each case would be assigned to a master of requests who would serve as reporter for it; he would then be responsible for gathering pertinent documents, communicating with the contesting parties, and, most importantly, preparing a report for the entire council on the principal issue of the case with a recommended resolution. The assembled members of the council, made up of other masters of requests (all of whom were *avocats*) would express their opinions and vote on the outcome; ties were broken by the Chancellor himself.

The process became more complex during the reign of Louis XIV. While this track remained technically in place, it was supplemented by a series of between five and seven *bureaux*, each responsible for affairs pertaining to given subjects (police, commerce, Protestants, the church etc.) or certain types of action, such as *cassation*, which would review the reports in anticipation of council meetings. This allowed them to run their reports before colleagues before delivering them to the Conseil itself. The deliberations of the *bureaux*, if they generated any records, have not survived; we have only the final *arrêts*, signed by the reporting magistrate and the Chancellor.

*commissionaire* and summons both parties to report to him, but after that, the trail goes cold. Lacking an *arrêt définitif*, it seems likely that the dispute was settled out of court, to spare both parties the costs of litigation, a solution that was far from unheard of in this period.[61]

Whatever the outcome of the case at the Conseil privé, we know that Polony continued to ply his trade in the provinces. A decade after his run-in with Contugi, we find him in the town of Saintes, still calling himself "veritable *orviétan* de Rome" but now adding the qualification of "médecin occuliste de Sa Majesté."[62] There he apparently cured the blindness of one Jean Sauvignon. This feat was documented at Polony's request by a notarial act, signed by a local lawyer, teacher, and clerk: the rationale being, "as much for the public interest as for his own reputation, it is important for [Polony] to take a notarized act of all cures and operations he has effected in the kingdom."[63]

The Contugi-Polony conflict yields important insights about the different ways that charlatans legitimated themselves and about how "inter-charlatan" disputes were arbitrated. For Polony, legitimacy was derived from medical experience, ideally shown through first-hand demonstration, and then preserved through written testimony, including notarized acts and other legally binding documents. Polony was not alone in shrewdly collecting such attestations; in the absence of any centralized licensing regime, documenting successes was part of the standard modus operandi of charlatans in France and elsewhere in Europe, especially for itinerants who moved across different legal

[61] See below, section 4: the 1685 Boulogne suit was also settled in this way, although in this case the notarized settlement survives.

[62] Charles Dangibeaud, "Un Orviétan à Saintes," *Recueil de la Commission des arts et monuments historiques de la Charente-Inférieure* 15 (1901): 531–43.

[63] "…tant pour l'intérest public que celuy de sa réputation et autres raisons, luy est important de prendre acte de notoriété de toute les cures et opérations qu'il a fait dans le royaume," Ibid., 532.

jurisdictions. [64] In attempting to secure the legitimacy of the Faculty via notarized attestation in 1648, Contugi was engaged in much the same project. Indeed, the whole cause of the debate between him and Polony (following the account of the *Factum poetique*) was the former's effort to secure some kind of legal recognition for his royal privilege in Toulouse. His goal in doing so was either to incorporate the Languedoc into a regular sales circuit of his own, or perhaps to franchise the sale of *orviétan* there to a subordinate or someone else.

Securing such attestations served several purposes. The first was judicial: they could be produced as documentary evidence before judges. The second was commercial and persuasive: various types of attestations, especially parchment letters and brevets with dangling wax seals, could be brandished as props on stage, to convince the sceptical passer-by of the official legitimacy of a charlatan and physically manifest a record of success. Charles Dangibeaud has cited the presence of sealed parchments in visual depictions of charlatans and operators from this period, notably on the table in the "Tooth-puller" of the Flemish painter Théodore Rombouts (see Appendix, Figure 11).[65] Numerous other examples could be added: for example, the famous 1660 engraving of a bespectacled, snake-handling charlatan by Francesco Curti after Giuseppe Maria Mitelli, which depicts a stack of parchments with dangling seals and medallions (see Appendix, Figure 12). Cure attestations could also be printed and distributed with handbills and broadsheets, as could the texts of royal brevets and letters patent. "Par permission du Roy" appears prominently on the backdrops of eighteenth-century engravings of

[64] On Bolognese *fedi di guarigione* and other forms of cure attestation across Europe, see Gianna Pomata, *Contracting a Cure: Patients, Healers, and the Law in Early Modern Bologna* (Baltimore: Johns Hopkins University Press, 1998), 50–51, 216–217n97; for their use in documenting miraculous cures, see Marc Bloch, *The Royal Touch* (London: Routledge & Keagan Paul, 1973), 158–159.

[65] Dangibeaud, "Un Orviétan à Saintes," 533–534.

charlatans (see Appendix, Figures 13 and 14). We can imagine Polony carrying a number such attestations with him in his itinerant practice, brandishing them onstage when needed. Such attestations provided material support for his medical claims, whether they were notarized acts or letters from civil magistrates and princes like Conti, or his necklace and gold medallion from the Estates General—the effect of which was no doubt even more dramatic than that of the parchment.

Whatever the means by which it was documented and displayed, Polony's legitimacy ultimately rested in effectively demonstrating his cures through live poison trials. When the court decided to use pigs, he responded by poisoning himself to demonstrate the effectiveness of his *orviétan*: at which moment, in effect, he literally *embodied* the experiential approach to medical legitimation. Contugi's approach seems to have been more legalistic in nature, at least in Toulouse (if not before the twelve Paris Faculty doctors in 1648, for whom he apparently provided some kind of demonstration); he seems to have simply and straightforwardly sought to register his royal privileges before the Parlement there.

In this case, however, a live poison trial was organized to arbitrate a dispute. How common were such practices? [66] Katherine Park describes poison competitions between *pauliani* snakehandlers in Italy, but these were unlicensed and disapproved of by physicians and civil authorities.[67] Likewise, in his work on Italian charlatans, Gentilcore describes on-stage poisoning as a trope of snakehandlers, but also provides an interesting case study of a licensed charlatan named Lavinio Sclavo testing four poisons on himself

[66] The forthcoming work of Alisha Rankin, provisionally entitled "The Poison Trials: Antidotes and Experiment in Early Modern Europe," promises to shed much light on this question.

[67] Katharine Park, "Country Medicine in the City Marketplace: Snakehandlers as Itinerant Healers," *Renaissance Studies* 15, no. 2 (2001): 104–20.

as an *esperienza* in the piazza before a crowd, that included one Giacomo Giacobelli, a former protophysician and member of the Roman College of Physicians. Sclavo secured a signed certificate of the successful test from Giacobelli, which brought the latter grief before *protomedicato* tribunal—not unlike what happened to De Gorris and the other Paris Faculty regent-doctors in 1648. Gentilcore also points out that the self-administered poison test had been described as a stock charlatan deception as early as 1544.[68]

Animal testing—sanctioned by civil and medical officials—appears to have been far more common in settling disputes. The use of animal testing is of course well attested in natural philosophic controversies, the most famous of which being the trials of snakestone involving Athanasius Kircher and Francesco Redi. Animal testing appeared in judicial settings as well.[69] In 1649 the Bologna College of Physicians tested the *orviétan* of a charlatan named Francesco Nava by having two dogs bitten by a viper (the second dog serving as the control).[70] In this case, however, only one drug was being tested and so the trial was not adversarial in the same way as Contugi and Polony's.

The closest analogue I have found to the Polony-Contugi poison trial is from Brittany. In 1697 a live poison trial before the seneschal of Hennebont in Brittany was used to settle a dispute between a local druggist named Joseph Déru, called "Belle-Fleur," and the recently arrived charlatan, Paul Toscano, "medico chimico," who sought to have Déru banned from selling *orviétan*. Indeed, the charlatan-chymist Toscano bragged of having won similar lawsuits against rival *orviétan* vendors in the past in

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[68] David Gentilcore, *Medical Charlatanism in Early Modern Italy* (Oxford: Oxford University Press, 2006), 120–121, 136–137; on the poison-test as deception, see Park, "Country Medicine in the City Marketplace"; Gentilcore cites Pietro Andrea Mattioli, *I discorsi di M. Pietro Andrea Matthioli ... nei sei libbri di Pedacio Dioscoride Anazarbeo della materia medicinale.* (Venice: Felice Valgrisio, 1597), 909–910.

[69] Martha Baldwin, "The Snakestone Experiments: An Early Modern Medical Debate," *Isis* 86, no. 3 (1995): 394–418.

[70] Gentilcore, *Medical Charlatanism*, 144–145.

Genoble and Toulouse. The seneschal assembled a panel composed of the town physician and two surgeons, to which two local apothecaries were later added (following their complaint). Two stray dogs are selected for the trial, to which Toscano objected, arguing that the test should be on pigs, "being the animal which has the most similarity to the human body," and that the earlier trials to which he was party used pigs. The dogs were used, in spite of Toscano's objections, and his dog died, but he accused Déru of switching his own dog for a healthy one with the same colour of fur. Unfortunately, as in the Contugi-Polony case, the final sentence is not known.[71]

Some features of the Contugi-Polony's litigation can thus be found among other cases in France and Italy, but the distinguishing element of their conflict is the overlap of competing forms of official legitimation. France was still a kingdom with a plurality of jurisdictions in 1656. The central monarchy had survived the Fronde and was reasserting its control, although Louis XIV was still a few years away from personal rule (1661), and the effective, centralizing state associated with Jean-Baptiste Colbert was still in the future. Legal pluralism had important consequences in the medical world: amidst the diversity of local jurisdictions, it made sense from the perspective of the itinerant charlatan to keep constant records of effective cures, successful trials, and permissions granted by civil authorities. All of these documents could be presented before a local tribunal in case of a conflict with a rival charlatan or a local medical corporation. By travelling to the south to sell his *orviétan*, Contugi was subverting provincial charlatans like Polony. He tied his own legitimacy to the expanding central monarchy, rather than relying on local authorities or attestations. In so doing, however, he encountered

[71] Edouard Guéguen, "L'essai de l'orviétan : une démonstration de toxicologie dans un prétoire en 1697," *Revue d'histoire de la pharmacie* 51, no. 178 (1963): 168–72.

resistance at the Toulouse Parlement, and again appealed to royal authority, aiming to move the conflict to the more favourable playing field of the Conseil privé, where his privileges were registered.

The Contugi-Polony conflict stands as a testament to the complexity of overlapping jurisdictions, conflicting privileges, public drug trials, and the need to constantly preserve and carry records to demonstrate legitimacy. All of these factors must have been features of daily life for the charlatans of seventeenth-century France. This conflict also demonstrates that although an appeal to royal authority was a powerful asset, it was still far from absolute.

*4. From secret to brand: The Contugi privilege vs. pharmacopoeia orviétan, 1682*

A few decades after their tangles in the provinces, the Contugi family would face new problems closer to home. In the fall of 1682 a new apothecary's boutique opened opposite that of the Contugi's on the rue Dauphine facing the Pont Neuf. Roberte Richard, the widow of Christophe Contugi, reported that the new boutique's attendant, one Jean Regnault, was replicating their display and containers (*montre et boëttes*) and selling his own drug under the name of *orviétan*. Her son, Louis-Anne, was the legal holder of the *orviétan* privilege but happened to be out of town, and so Roberte, unable to tolerate such a flagrant violation of her family's privileges, brought her grievance to the Châtelet—making the request under her own name—and on the December 18, 1682, the Commissioner Adrien Baudelot effected a seizure of all merchandise in the offending shop. Before long, however, Roberte found herself the defendant in a countersuit: the plaintiff was the royal apothecary Anthoine Boulogne, then living in Versailles, who made it known that the boutique opposite that of the Contugi's belonged to him and that

Regnault was simply his store clerk (*garçon de boutique*), selling the *orviétan* on his behalf. The Contugi-Boulogne conflict would drag on for over two years, and would raise the pivotal question of whether the Contugis could continue to hold an exclusive privilege to sell *orviétan* when the secret of its recipe had been "divulged" in multiple pharmacopeias.[72]

Boulogne initially brought his case to the Prévôté de l'Hôtel du roi, where his own privileges were registered. This raised a jurisdictional conflict between the Prévôté de l'Hôtel du roi—which held jurisdiction over the servants of the royal house and the privileged artisans following the court, including royal apothecaries like Boulogne—and the *Parc civil* of the Châtelet—the court of first instance for the city of Paris, where Roberte had reported the initial infraction.[73] Boulogne requested a *règlement de juges* from the Conseil privé to decide which court should hear the case.[74] During this time, Contugi appears to have secured new letters patent on July 16, 1683 and registered them at the Châtelet. These jurisdictional conflicts tied up the case for over a year, but on March 27, 1684 an *arrêt* from the Conseil privé ordered the case to be placed the case under its jurisdiction and ordered both parties to present their arguments within a week.[75]

In response, Boulogne had a *Requeste servant de Factum* printed in order to lay out his case. He argued that the 1647 privileges that Roberte Richard invoked in the initial seizure were made out personally to Christophe Contugi and were non-hereditary,

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[72] These details are from the notarized act that ultimately resolved the dispute: see BIUS Pharmacie, Reg. 31, "Transaction faite entre le Sieur et veuve Contugi et les apothiquaires privilégiés sur l'instance à l'occasion de la saisie faite à le Sieur Boulogne" (August 14, 1685), fol. 272-275. For a summary see Planchon, "Notes sur l'histoire de l'Orviétan" 245-250.

[73] See Michel Antoine et al., *Guide des recherches dans les fonds judiciaires de l'Ancien Régime* (Paris: Imprimerie nationale, 1958), 11–12 on the Prévôté de l'Hôtel, 163–178 on the Châtelet.

[74] On the procedures of the Conseil privé see above, this chapter, n. 37 and n. 58.

[75] *Requeste servant de Factum pour Antoine Boulogne Ayde-Apoticaire du Corps du Roy, Défendeur. Contre Roberte Richard, veuve Contugi, dit l'Orvietan, et son fils, Demandeurs et Défendeurs.* (Paris: s.n., 1684), 1–3.

since they mentioned nothing about his widow or heirs, and thus were extinguished upon his death. Likewise, he argued that these letters had not given Christophe, much less his widow, the right to run a boutique in Paris, but rather had allotted him only the right to sell it itinerantly (*une faculté ambulante*). Consequently, the initial seizure was without legal foundation. As such, Boulogne requested that their boutique be closed and that they be fined 3,000 *livres* for damages against him, pointing to the undue force of the seizure, alleging that the Contugi widow "closed his boutique down, broke everything that was found within it, and damaged and seized his sign," not to mention "the loss of all the *orviétan* removed by the Contugis, the production of which had cost a considerable sum."[76] He also argued that the letters patent that Louis-Anne Contugi had secured in the intervening period were invalid because he has not provided the requisite demonstration before civil magistrates, and furthermore, that he registered them at the Châtelet in prejudice of their ongoing case before the Conseil privé.[77]

Most of these points were aimed at invalidating the initial seizure of goods ordered by Roberte Richard, but the response to the fifth question—as to whether the Contugis could in any case prohibit apothecaries from selling *orviétan*—strikes at the heart of the issue of pharmaceutical secrecy and the prerogatives of apothecaries. Boulogne argued that *orviétan* is not a medical secret at all, but a publicly-known antidote described in various pharmacopeias. As examples, he first cites Schroeder's *Pharmacopoeia medico-chymica*, "the Roman pharmacopeias for more than four centuries," the pharmacopeiae of Brussels, Antwerp, Lyon, Augsburg, Venice, Naples, as

[76] Ibid., 5.

[77] I have not been able to find a copy of the 1683 letters patent. The condition is not present, however, in the reconfirmed privileges Contugi secured in 1685: see AN $O^1$ 30, fol. 397 (27 December 1686). It is possible that Boulogne is drawing this stipulation from the 1647 privileges, and deliberately conflating them with the 1683 privileges in order to add another argument to his case.

well as the recent and royally-sponsored pharmacopeia of Moyse Charas.[78] As Boulogne would have it, physicians daily prescribed *orviétan* using any one of these various formulae. Boulogne granted that these recipes may not be the same as that used by the Contugis, but this difference was not due to their recipe being a hereditary medical secret, but rather to the fact that the Contugis used discounted, nearly-expired ingredients (this, he alleges, had been argued by several authors, who had exposed them). Quality, then, is what distinguishes the *orviétan* of the apothecaries from the *orviétan* of the Contugis, and this quality is rooted in the skill of the practitioner: Boulogne asked rhetorically,

> Who could convince themselves that a woman without experience, and her son, without having any tincture of medicine or pharmacy, would know how to make mixtures, preparations, coctions, and settle everything that goes into the composition of a remedy which apothecaries only attempt after having undertaken much work, long study, repeated public examinations, and the production of a masterpiece—in sum, after having provided evidence of their capacity to be admitted [to the guild] and be granted the faculty to exercise this art?[79]

Boulogne thus argues that the *orviétan* produced with all the assurances of the corporate world is quite simply better than anything Contugi and his mother Roberte could ever hope to produce. Boulogne clinches his case with a volley of arguments against the notion that *orviétan* was a hereditary family secret: Not only was *orviétan* in the pharmacopeias, but it had also been produced publicly, even in Paris, in a demonstration organized by Henry Rouvière, the syndic of the apothecaries of the royal households, Boulogne's own corporation, before the Lieutenant General of Police and the Paris Faculty. Likewise, he argued that "this remedy cannot be too public at a moment when so

[78] On the presence of *orviétan* recipes in these pharmacopoeias, see below.

[79] "Qui peut se persuader qu'une femme sans expérience, et sons fils sans avoir aucune teinture de médecine ny de Pharmacie sçache et puisse faire les mélanges, les préparations, les coctions, et régler tout ce qui entre en la composition d'un remède que les Apoticaires n'entreprennent qu'après de grands travaux, de longues études, des expériences publiques et réitérées, la confection de leur chef d'œuvre, et avoir donné des preuves certaines de leur capacité pour pouvoir estre admis, et avoir la liberté d'exercer cet Art," *Requeste servant de Factum pour Antoine Boulogne*, 9.

many have been accused of poisonings," clearly referring to the recently concluded Affair of Poisons.[80] If *orviétan* were the special preserve of the Contugis, it would "dismember" pharmacy and alienate apothecaries from their proper function; as such, it would run contrary to the order of arts and crafts which the king intended for his subjects.

Boulogne's argument rests upon two foundations: the necessary superiority of the training and consequently skills of corporate apothecaries, and the assertion that *orviétan* is not itself a hereditary medical secret at all. The second claim has an important basis. By 1685, *orviétan* had indeed been included in several pharmacopeias. The most recent of these, the *Pharmacopée royale* of Moyse Charas, criticised those charlatans who claimed to own the true secret of *orviétan* in much the same terms as Boulogne.[81] But the question still remains: Did Charas or any of the other pharmacopeias have the familial recipe of the Contugi family for the "one true *orviétan*"?

It is virtually impossible to say. Patrizia Catellani and Renzo Console have demonstrated that recipes of *orviétan* were extremely variable, and astutely point out that this variability was in fact a product of the conditions of competition and medical secrecy under which *orviétan* was originally disseminated. Secrecy served to encourage a multiplication of recipes, as different charlatans, apothecaries, and physicians sought to replicate, imitate, counterfeit, or publicize the secret. Under these conditions, the number

[80] "…ce remede ne peut estre trop public dans un temps où tant de gens ont esté accusez de poison," Ibid.

[81] "Les bons effets que l'Orviétan bien préparé a pû produire autrefois, ont donné occasion à divers affronteurs d'employer toute sorte de moyens pour faire croire qu'eux ou leurs devanciers en estoient les seuls inventeurs, et qu'il n'y avoit qu'eux qui en eussent la vraye recepte; En sorte que plusieurs de ces trompeurs ont couru les Provinces et les Royaumes, et que sous l'apparence frauduleuse de quelque bon succez, en pantalonnant et se joüant du peuple crédule dans les Places publiques, ils ont attrapé son argent, et amassé des sommes considerables du debit extraordinaire qu'ils ont fait d'un Orvietan supposé," Moyse Charas, *Pharmacopée royale galénique et chymique* (Paris, 1676), 323–324.

of ingredients expanded and recipes became exceedingly complex.[82] Throughout the later sixteenth and early seventeenth centuries, *orviétan* does not appear in printed pharmacopeias: at least initially, members of the corporate medical community seem to have sought to keep their distance from the *orviétan* charlatans.[83] According to Catellani and Console, recipes for it begin to appear in printed pharmacopeias beginning with Johann Schröder's *Pharmacopoeia medico-chymica* in 1655, which is likewise the first that Boulogne cites in his *Requeste*.[84] Indeed, by the time Boulogne wrote, recipes for *orviétan* were readily available in the pharmacopeias of Schröder (1655), Prévost (1666), Kratzman (1667), Herford (1667), Hoffmann (1675), and Charas (1676); the official pharmacopeia of Rome (1668) and Lyon (1676); as well as in La Martinière's 1665 treatise on theriac, mithridatium, and *orviétan*.[85] It seems plausible that *orviétan* made its entry into the pharmacopoeias at precisely the moment where they began to include chymical remedies, as the titles of Schröder and Charas suggest.

In other areas, Boulogne's claims are more dubious. *Orviétan* was not included in the Roman pharmacopeia until 1668, which is a far cry from the "four centuries" that Boulogne alleges. But this hyperbole can perhaps be explained by another of his claims, namely that of the public demonstrations and preparations of *orviétan* he mentions having been recently undertaken by Rouvière, the royal apothecaries' syndic. This almost certainly refers to Rouvière's public preparation of theriac, described in the 1685 *Journal*

[82] Catellani and Console, *L'Orvietano*, 59.
[83] Ibid., 61.
[84] Johann Schröder, *Pharmacopoeia medico-chymica sive Thesaurus pharmacologicus*, 4th ed. (Ulm, 1655), 184.
[85] Catellani and Console, *L'Orvietano*, 61–79. Of these, Boulogne only cites Schröder, Charas, and the pharmacopeia of Lyon and Rome.

*des Sçavans*.[86] Beforehand, Rouvière secured all of the ingredients in the Galenic recipe for the theriac of Andromachus in large quantities, including opolbalsam and xylobalsam, and on the day of his demonstration, he presented the Paris Faculty, apothecaries, and the interested public with the spectacle of fifty-eight dozen live vipers, pronounced a speech, and then cooked the vipers with only two spoons of water in a massive bain-marie. He then kneaded the resultant juices with the other ingredients into *trochiques* (bread lozenges), which preserved the volatile salts to which theriac's virtues as an antidote were credited.[87] The royal apothecaries' preparation followed an earlier public preparation of theriac, organized the previous year (1684) by the urban apothecaries Matthieu-François Geoffroy, Antoine Josson, and Simon Boulduc.[88]

The reference to Rouviere's public theriac demonstration thus allows us to understand some of Boulogne's more puzzling statements, namely his claim that the secret of *orviétan* has been included in pharmacopeias for centuries: he seems to be saying that *orviétan* is largely indistinguishable from theriac. To what extent can *orviétan* be seen as a species of theriac? No recipe for the Contugi family *orviétan* appears to have survived, at least that I know of, but the question can be answered by looking at the variety of other *orviétan* recipes that have survived. Catellani and Console have examined thirty-five different recipes and determined that the number of ingredients varies between nine and fifty-seven, with an average of twenty-six. They provide useful comparative tables showing which ingredients appear in which recipes, and also offer a

[86] "Préparation célèbre de la Thériaque nouvellement faite à Paris par M. de Rouvière," *Journal des Sçavants* 13.13 (16 April, 1685): 228–231. The demonstration appears to have happened the previous March, around the same time as the *arrêt* that led Boulogne to produce his *Factum*.

[87] Ibid.

[88] Olivier Lafont, *Échevins et apothicaires sous Louis XIV : la vie de Matthieu-François Geoffroy, bourgeois de Paris* (Paris: Pharmathèmes, 2008), 47–52.

statistical approach to the data: acknowledging the hypothetical nature of the exercise, they selected the twenty-six most frequent ingredients to construct a kind of "ideal-type" of the *orviétan*.[89] Of these, the three most frequent are angelica root, honey foam, and "aged" theriac.[90] So, it can safely be said that most pharmacopoeia recipes of *orviétan* contained prepared theriac, and many of those that did not contained either mithridatium or some theriac ingredients, most notably viper flesh.[91] Therefore, even if *orviétan* cannot be reduced to theriac, as it might contain dozens of other ingredients, it seems clear that the two drugs were closely related. Indeed, it may not be a coincidence that the renewed interest in theriac, most dramatically illustrated by public preparations like the one described in the *Journal des Sçavans*, matched up quite closely with the appearance of *orviétan* in the pharmacopeia.

With this in mind, what was the outcome of the lawsuit between Boulogne and Contugi? Both parties eventually decided to settle out of court, signing a notarized cessation of hostilities on 14 August 1685.[92] Interestingly, Rouvière, the royal apothecary who led the theriac demonstration, appears as a party in the contract in his capacity as

[89] Catellani and Console, *L'Orvietano*, 119–134.

[90] Most orviétan recipes I have seen are careful to specify the use of "old" (*vetere*, *vielle*) in the sense of "aged" or well-fermented theriac (not "old" in the sense of "expired"). In his 1698 *Pharmacopée universelle*, Lémery explains the virtues of old theriac in the following terms: "La thériaque vieille est préférable à la récente quand il s'agit de résister au venin, parce qu'ayant fermenté ses parties se sont subtilisées, exaltées et rendues capables de dissoudre et de raréfier les congélations qui se dont faites dans le sang et dans les autres humeurs soit par les morsures ou piqueures des animaux venimeux, soit par les autres poisons coagulans, soit par l'air infecté, soit par la trop grande quantité d'acide qui se rencontre dans les corps," Nicolas Lémery, *Pharmacopée universelle* (Paris: Laurent d'Houry, 1698), 601–602.

[91] Catellani and Console follow Planchon in dividing *orviétan* into two general categories: the various forms of "Italian orviétan," which contain theriac; and the supposed *orviétanum praestantius* ("more-potent orviétan") of Lémery and the eighteenth century Paris *Codex*, which is more of an opiate or analgesic than an antidote: see Catellani and Console, *L'Orvietano*, 58–60.

[92] BIUS Pharmacie, Reg. 31, "Transaction faite entre le Sieur et veuve Contugi et les apothiquaires privilégiés sur l'instance à l'occasion de la saisie faite à le Sieur Boulogne" (August 14, 1685), fol. 272-275.

syndic for the corporation of the apothecaries of the royal households, of which Boulogne was a member.

According to the contract, the parties recognized the expensive legal fees that continued litigation at the Grand conseil would entail and resolved that, in order to "foster peace and friendship between them," they followed the "good counsel" of their friends and agreed to return their affairs as close as possible to the status quo that existed before Roberte's initial seizure.[93] The pending lawsuit at the Grand conseil was dropped, and the following specifications were made concerning the sale of *orviétan*:

> Louis Anne de Contugi remains free to compose, sell, and retail his orviétan as before, while the apothecaries of the Royal Houses will not be allowed to sell their orviétan (whose composition is taught in the pharmacopoeias) from the houses on the edge of the Pont Neuf, or to counterfeit the display, tickets, containers, marks or signs of said Contugi, son, nor to post signs with the name of Orviétan outside of their boutiques, as he does, nor in the roads, crossroads, and public squares of Paris, under penalty of all expenses, damages, and interest falling on the offender.[94]

The settlement thus prohibits Boulogne and any other royal apothecaries from selling *orviétan* out of any boutique on the Pont Neuf or from replicating any of the material aspects of the Contugi *orviétan* brand, including their displays, handbills (*billets de distribution*), containers, and signage. The contract does not, however, prohibit them from otherwise making or selling "their *orviétan*," carefully distinguished from that of the Contugi's as the *orviétan* that is included in the pharmacopeias recipes.

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[93] BIUS Pharmacie, Reg. 31, 274r°-v°.

[94] "…demeurant libre au Sieur Louis Anne de Contugi fils de composer, vendre, et débiter son orviétan comme auparavant, sans que les apotiquaires des Maisons Royales puissent vendre et débiter leurs orviétan dont les compositions sont enseignez par les autheurs des pharmacopées aux maisons qui sont au bout du Pont Neuf, prendre ny contrefaire le montre, les billets de distribution, les boëtes, la marque ny l'enseigne dudit Sieur Contugi fils, ny afficher comme luy au dehors leur boutique, ny dans les Rues, Carrefours et places publiques de Paris le nom d'orviétan a peine de toutes dépens, dommages, et intérêts contre les contrevenans," BIUS Pharmacie, Reg. 31, 274v°.

Implicit within the agreement is a recognition on the part of the Contugis that the genie was out of the bottle, as far as their *medical secret* was concerned, but they might still retain their cachet in advertising, branding, and sales location. So long as their rivals did not interfere with these features, then apothecary production and sale of what might be called "pharmacopeia-*orviétan*" could be tolerated. The settlement thus reinforced a trend already apparent in the Polony debate; that is, it stressed the Contugi *orviétan* as a brand rather than a medical secret.

What was the Contugi brand in concrete terms? Answering this question will take us from legal debates and notarized settlements and into print advertising and material culture. These images corroborate one of the main points of the Polony case, namely, the centrality of the sign of the Sun. It appears prominently at the top of the Contugi broadsheet advertising poster as a sun with a human face, surrounded by the motto, "ut sol solus ut sal salus" (see Fig. 4).[95] The sign is surrounded by coats of arms, including those of the Pope and of France and Navarre. The rest of the border is made up of snakes, mushrooms, frogs, fish, spiders, scorpions, snails, and rabid dogs, all sources of poisons to which *orviétan* served as an antidote. These images may also have been present on the larger displays (*tableaux* and *montes*) that are mentioned.

The sun is without a doubt the most important of these images, and appears prominently on the small lead containers (*boites*) that *orviétan* was apparently sold in (see Fig. 1 for an intact example). Even in the twenty-first century, these containers continue to be unearthed by French hobbyists with trowels and metal detectors. Their lids often had the figure of the sun with a face (see Appendix 3, Figures 3-5 and 8-10) and a

[95] Roughly, "Sole as the sun, salutary as the salt," perhaps referring to the volatile salt to which the drug's effects as an antidote were attributed. See above in this section, on the role of the volatile salts in theriac.

few words, such as the name of the variety of *orviétan* or a motto.[96] The prominence of the sign of the sun—with its obvious links to the authority of Louis XIV—on both the broadsheet and the container lids, helps illustrate just what was at stake in the court debates between the Contugis and rivals like Polony and Boulogne. If we take the Contugis at their word, "the sign of the sun" was an inalienable mark, inseparable from their family and the hereditary secret to the true *orviétan*, even if it was used fraudulently by other charlatans.

After the debate with Boulogne, the conflicts surrounding the Contugi *orviétan* privilege seem to die down for a few decades. The parties appear to have lived in peace after the contract. In the following year, Louis-Anne Contugi would have his royal privileges confirmed and secure a passport to travel and sell *orviétan* throughout France. The December 27 1686 letters patent even specify that he holds the privilege jointly with his mother, perhaps in response to the difficulties that had arisen when Roberte acted legally to defend her son's privileges in his absence.[97] Antoine Boulogne would go on to be royal first apothecary in 1704.[98] Matters were settled with the royal apothecaries, and in the eighteenth century it would be the urban apothecaries guild that would duel with the Contugi family in the courts.

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[96] A veritable subculture of treasure hunters, numismatists and antiquarians maintain online forums where they display and help one another identify their discoveries; on their forums I have found images of several *orviétan* containers. Those in Figs. 2-3 may not have been Contugi-brand *orviétan*, and are marked "Orvietan de Rome." The container in Figs. 6-8, however, is almost certainly a Contugi container as it bears the "ut sol solus ut sal salus" motto found on the broadsheet.

[97] For the letters see AN $O^1$ 30, fol. 397 (27 December 1686); and the passport see AN $V^5$ 1246, fol. 209, February 6, 1686, registered at Conseil privé January 20, 1687. Le Paulmier, *L'Orviétan* 147–150.

[98] Maurice Bouvet, "Les apothicaires royaux," *Bulletin de la sociétié de l'histoire de la pharmacie* 5, no. 58 (1928): 62.

*5. Charles Dionis and the fate of the Contugi orviétan privilege, 1700-1741*

Two developments characterize the passage of the Contugi *orviétan* monopoly into the eighteenth century: the first was a series of problems with ensuring the privilege's succession down the Contugi family line; the second, closely related, was the growing involvement of Paris Faculty doctors with the family business. These developments culminated in the privilege's departure from Contugi hands in 1740, when it was purchased by a Paris Faculty Doctor, Charles Dionis (1710-1776).

The second-generation privilege holder in the Contugi line, Louis-Anne, died in 1696, and his widow Marie-Jeanne continued the business until her own death in 1699, at which time it passed into the hands of their two oldest children Jean-Louis and Marie-Geneviève.[99] Their new brevet of July 12, 1700 confirmed Jean-Louis as the successor of the privilege, but he was only fifteen years old, so his older sister, who was "instructed in the composition of *orviétan*," was appointed to "work conjointly" with her brother until his twenty-fifth year. The brevet also specified that the first physician Fagon would appoint "a capable man to inspect the composition."[100]

The same succession problems recurred in the fourth and final generation of the Contugi family's tenure of the privilege. Jean-Louis died in 1719, having acquired the title of esquire and *valet garderobe* of the Duke of Orléans, then Regent. Through his connections with the Regent, Jean-Louis ensured that the *orviétan* privilege would pass on to his son Florent, then only ten years old. In the meantime, the business was directed

[99] Le Paulmier, *L'Orviétan*, 66–68. Marie-Geneviève apparently had a rambunctious lifestyle, frequenting cabarets and cafés: in 1700, shortly after being granted the joint privilege with her brother, several relatives made an attempt to have her committed to a convent. She appealed directly to the first physician Fagon and Phélypeaux, Secretary of State for the Royal House; on which see Le Paulmier, *L'Orviétan* 70–2.

[100] AN $O^1$ 44, fol. 297v-198r, Item 1006, "Brevet portant que Geneviève Contugi travaillera conjointement avec son frère a la composition de l'orviétan jusques au temps qu'il ait 25 ans." Also transcribed in Ibid., Pièce XXVII, 178–179.

by his widow, Marguerite du Chesnoy, until her death in 1727.[101] During Florent Contugi's tenure of the privilege, this inspector was none other than the Paris Faculty doctor Nicolas Andry de Boisregard (1658-1742). Andry was quite far from being a marginal figure: he was in fact a former Dean of the Faculty (1724-1725) and famous author of *De la génération des vers dans le corps de l'homme* (1700) and *L'orthopédie* (1741), and a contributor to the *Journal des sçavans*. [102] As Le Paulmier has pointed out, Andry was also Charles Dionis's father-in-law: as *orviétan* inspector he was in the perfect position to recognize the profitability of the drug—he himself received 400 *livres* annually from it for his inspections—and likely had a hand in recommending its purchase to his son-in-law after the death of Florent Contugi.[103]

Andry was the official *orviétan* inspector in 1729, when a trio of local apothecaries had the Lieutenant General of Police effect a search of Florent Contugi's home and boutique, still on the Quai des Augustins, as a reprisal against an earlier search and seizure Contugi had effected against them for selling *orviétan* near his boutique.[104] The pretext for this reprisal—which forms but one episode in the long war between the Contugis and local apothecaries—was provided by the 1728 *arrêts* which aimed to reform the privilege system.[105] The apothecaries had reported Contugi to the Lieutenant

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[101] Ibid., 75–80.

[102] Nicolas Andry de Boisregard, *De la génération des vers dans le corps de l'homme* (Paris: Laurent d'Houry, 1700); and *L'orthopédie* (Paris: veuve Alix, 1741). On Andry's career, see Brockliss and Jones, *The Medical World of Early Modern France*, 449–450 (mainly on his work *L'orthopédie*), and especially Jacques-Albert Hazon, *Notice des hommes les plus célèbres de la Faculté de médecine en l'Université de Paris* (Paris: Benoît Morin, 1778), 192–195, which remains the best source of biographical details on Andry. Hazon notes that the daughter married to Dionis was Andry's only child.

[103] "Nicolas Andry, inspecteur préposé à la composition de l'orviétan, et beau père de Charles Dionis, avait inspiré ce marché avantageux pour sa fille. On y voit, en effet, que la vente de ce remède produisait encore de beaux bénéfices," Le Paulmier, *L'Orviétan*, 96.

[104] The best account of the conflict between Florent Contugi and the apothecaries' guild is Planchon, "Notes sur l'histoire de l'Orviétan," 293–298. See also Le Paulmier, *L'Orviétan*, 86-88.

[105] See above, ch. 1.

General of Police for failing to deliver his brevet to be re-examined under the new privilege regime. The Parisian apothecaries' guild had likely been on the lookout for such an opportunity. Their guild was attentive to any potential violations of their own corporate privileges and, consequently, exceedingly diligent in inquiring with the Châtelet and other courts to secure copies of any new privileges, acts, and judgments pertaining to potential interlopers, including the Contugis.[106] The apothecaries accompanied the bailiff (*huissier*) who had been delegated to effect the seizure, and surprised Florent Contugi in his chambers, still in his nightgown (*chemise*). Contugi, who was by then twenty years old, immediately sent for Andry and his legal guardian (*curateur*), the Paris bourgeois François Perrin. Andry claimed that he did not know of the 1728 *arrêts*, and argued that the failure to present the privilege for re-examination was "not due to any lack of respect or submission." He, the guardian, and the young charge refused to open a cabinet which contained the drug's ingredients for the bailiff to inspect, on the grounds that opening it would disclose the drug's secret. Consequently, the cabinet and the boutique were sealed, but nothing was seized.[107] Contugi successfully appealed the apothecaries' sealing of his boutique the following week at the Grand conseil, but the back-and-forth of lawsuits with the apothecaries would go on for years,

[106] See above: although the Boulogne episode (see above, this ch., section 4) occurred with privileged royal apothecaries, the judgements and privileges surrounding it were diligently copied into the registers of the Paris apothecaries guild, held at the BIUS Pharmacie. For the long series of suits and countersuits of which this episode forms a part, see BIUS Pharmacie, Boîte BA, Affaires Contugi (procès de l'orviétan), 1726-1736.

[107] "Lesdits Andry, Perrin, et Contugi n'ont voulu représenter les clefs ni faire ouverture de ladite porte pour ne pas communiqué et faire voir les drogues qui entrent dans la composition dudit orviétan," BIUS Pharmacie, BA 17, "Procès verbal de transport et saisie faite à la requête des maîtres et gardes apothicaires en la boutique de Contugi et apposition des scellés sur la porte de son magasin," August 6, 1729. See also the transcription from the Châtelet registers in Le Paulmier, *L'Orviétan*, Pièce XXXIX, 201–205.

ultimately ending with them gaining the right to inspect the Contugi *orviétan* boutique in 1736.[108]

Andry was party to this episode, and would thus have been able to inform his son-in-law Dionis of both the profitability of the privilege as well as its attendant pitfalls before Dionis purchased it in 1741. He was afforded the opportunity to acquire it by yet another succession crisis: Florent Contugi died in 1740 without leaving behind a wife or any children of his own (he never married). The privilege passed to his sisters, Margueritte-Françoise and Anne. The latter was married to a lawyer, Louis Sagot, but neither of the two sisters seems to have been willing or able to run the business, and so they decided to sell the privilege to Dionis in exchange for an annual pension of 1,000 *livres*.[109]

The fact that the last holders of the Contugi *orviétan* privilege were women bears some emphasis here. As we have seen, women played important roles in the *orviétan* dynasty: how did these features among privileged vendors like the Contugis compare with practitioners in the corporate medical world? Medical dynasticism appears to have been a feature shared across the corporative/non-corporative divide. Multigenerational businesses were especially common among apothecaries.[110] But the role of women

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[108] BIUS Pharmacie, Reg. 9, Arrêts des conseils du Roy (1614-1777), 63-67; for the conclusion see esp. no. 67, "Lettres patentes maintenant F. Contugi dans son monopole, avec autorisation aux apothicaires de procéder chez lui aux visites et autorisation de débiter de l'orviétan," December 31, 1736.

[109] MC ET XV 353, "Désistement de privilège de Margueritte-Françoise Contugi et Anne Contugi à Charles Dionis," September 5, 1741, 2 fols.; and AN $O^1$ 85, p. 333-337, "Lettres patentes de privilège exclusif pour la composition de l'orviétan en faveur du Sieur Dionis," September 29, 1741. Technically, the Contugi sisters "desisted" from the privilege, which Dionis then proceeded to renew with the Secretary of State in his name. It should also be noted that in addition to the 1,000 *livre* pension payable to the sisters, another 1,000 was also due to the six children of their aunt, Marie-Geneviève Contugi (veuve Marchand), who had previously held the privilege jointly with their father Jean-Louis until his majority (see above). This provision may be the legacy of an earlier agreement between Jean-Louis and Marie-Geneviève.

[110] Christian Warolin, "Le cadre de vie professionnel et familial des apothicaires de Paris au XVIIe siècle" (Thèse de doctorat en Histoire, Université Paris IV-Sorbonne, 1994), 225–278; Christian Warolin, "La dynastie des Boulduc, apothicaires à Paris aux XVIIe et XVIIIe siècles," *Revue d'histoire de la*

appears to have been considerably more important among the secret remedies vendors. In stark contrast with the important role of women in bearing, transmitting, and selling secrets and privileges in the Contugi monopoly, the rights of women in the medical guilds were being curtailed in the sixteenth and seventeenth centuries. While in the fifteenth century widows were permitted to continue running their husband's shops so long as they hired a journeyman, guild statutes were gradually modified across France to oblige the widows to actually marry the journeyman, rather than merely employ him.[111] Among the secret remedies vendors, by contrast, a widow like that of General La Motte could run her late husband's business for decades.[112] Likewise, as we have seen, mothers and sisters like Roberte and Geneviève Contugi played active roles in the family business on both formal and informal levels: their names were in fact listed alongside those of the male *orviétan* heirs in the family privileges.[113]

In short succession, the Contugi sisters sold all of their equipment and related facilities to Dionis as well, notably the house and boutique on the Quai des Augustins, for

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*pharmacie* 89, no. 331 (2001): 333–54; Françoise Lehoux, *Le Cadre de vie des médecins parisiens aux XVIe et XVIIe siècles* (Paris: Picard, 1976).

[111] Brockliss and Jones, *The Medical World of Early Modern France*, 190, 263; Susan Broomhall, *Women's Medical Work in Early Modern France* (Manchester: Manchester University Press, 2004), 24–31; Jean Flahaut, "L'exercice de la pharmacie par les veuves d'apothicaires du XVe au XVIIIe siècles. lère partie: aspects réglementaires," *Revue d'histoire de la pharmacie* 90, no. 335 (2002): 367–78.

[112] On La Motte's widow see above, ch. 1, sect. 5.

[113] This phenomenon does not appear to be unique to France: the cases of the Grimaldi electuary in Bologna and the Colochi plague remedy in Venice likewise suggest that women played important roles in transmitting medical secrets in multi-generational familial monopolies. On the Grimaldi electuary, see David Gentilcore, *Medical Charlatanism in Early Modern Italy* (Oxford: Oxford University Press, 2006), 66–78; and Gianna Pomata, "Practicing between Earth and Heaven: Women Healers in Seventeenth-Century Bologna," *Dynamis* 19 (1999): 119–43. On the Colochi plague remedy, see Jane Stevens Crawshaw, "Families, Medical Secrets and Public Health in Early Modern Venice," *Renaissance Studies* 28, no. 4 (2014): 597–618. See also Brockliss and Jones, *The Medical World of Ealry Modern France*, 627–628, for similar cases. It should also be mentioned that the famous English proprietary remedy, Daffy's elixir, was entrusted to Anthony Daffy's widow to be passed on to his daughters as a source of income, although this was later contested by his widow's new husband: see Haycock and Wallis, *Quackery and Commerce* 7. For more on Daffy's elixir see below, ch. 5.

the sum of 8,000 *livres*.[114] There can be little doubt that the medical secret *orviétan* was communicated to Dionis, either by the Contugi family or perhaps even by Andry, who appears to have been privy to it as official inspector. This medical secret is not, however, mentioned in the notarized contracts, and it seems not to have been assigned any monetary value.

How can we explain the interest of a Paris Faculty doctor in acquiring the privilege to what Brockliss and Jones have called "that most quintessentially charlatanesque of remedies"?[115] Was he "hungry for cash" to use Guy Patin's phrase, as De Gorris supposedly had been in 1648? This is certainly possible, but as his own privilege notes, Dionis was descended from a line of famous courtly practitioners: he was grandson of Louis XIV's surgeon, Pierre Dionis, and son of the Dauphine's physician, François Dionis.[116] Brockliss and Jones have pointed out that the Paris Faculty became "complicit" with "Quack Street" in the late eighteenth century, as its doctors embraced the financial rewards of medical entrepreneurialism, but as this chapter has shown, the Faculty's complicity extends much further back, through Andry and all the way to the mid-seventeenth century endorsement by Jean De Gorris and the twelve doctors.[117]

For the first twenty years of his tenure of the privilege, Dionis appears to have operated much as the Contugis had, focusing primarily on the Parisian market. This changed drastically beginning in 1762: from then until the end of his life in 1776, Dionis granted short-term contracts, typically three-years in duration, to a broad range of medical practitioners to sell *orviétan* on his behalf "en son nom et comme son

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[114] Ibid., "Vente et constitution à Charles Dionis," September 29, 1741, 2 fols.
[115] Brockliss and Jones, *The Medical World of Early Modern France*, 638.
[116] AN $O^1$ 85, p. 333-337, "Lettres patentes en faveur du Sieur Dionis"; Le Paulmier, *L'Orviétan*, 97.
[117] Brockliss and Jones, *The Medical World of Early Modern France*, chaps. 10, esp. 636–637.

commissionaire," and registered with the Prévôté de l'Hôtel du Roi.[118] Whereas Adrien Helvétius harnessed the power of the state's fiscal infrastructure to distribute his remedies to the French provinces,[119] Dionis devised a putting-out system, wherein he served as the central producer and the legal privilege-holder but contracted the actual distribution and sale of the drug to a vast network of sub-contractors. This finally actualized the kingdom-wide potential inherent in the original 1648 privilege: where Christophe Contugi personally went on tour to sell his antidote in the provinces, a century later Dionis simply contracted an army of vendors to do it for him.

Dionis was not without his critics, of course, and his operation may have harmed the Paris Faculty's credibility. When it protested the establishment of the *Commission royale* in the 1770s, the advocates of this new regulatory body could point to the Faculty's long history of support for charlatans: they ridiculed the Faculty's gall for wanting to be involved in the new regulatory regime, described Dionis' letters patent as "a shameful and abusive privilege to flood the whole kingdom with charlatans," and alleged that "it is from the bosom of the Faculty herself that these colonies of acrobats receive their missions."[120] Despite such protests, the Faculty never challenged Dionis' privilege as it had De Gorris' endorsement of the same drug a century earlier, and the

[118] For a breakdown, see above, ch. 1, sect. 3, and Pierre Baron, "La vente de l'orviétan en France à la fin du XVIIIe siècle," St. Honoré les Bains, 6-8 June 1997, *Actes de la Société française d'histoire de l'art dentaire*, accessed May 10, 2014, http://www.biusante.parisdescartes.fr/sfhad/vol2/debut.htm. See also the useful graph in Brockliss and Jones, *The Medical World of Early Modern France*, 640–642; and the list of *commissionnaires* in Le Paulmier, *L'Orviétan*, Pièce LII, 233–246.

[119] See below, ch. 4, esp. sect. 5.

[120] "Pourquoi la Faculté n'autoriseroit-elle pas les Empiriques, puisqu'elle souffre qu'un de ses members ait le privilège honteux et abusif d'inonder tout le Royaume de Charlatans? C'est du sein même de la Fauclté que les colonies de Bâteleurs reçoivent leur mission," *Observations sur la requête présentée au roi par la Faculté de médecine de Paris, contre l'établissement de la Commission royale de médecine.* (Louvain: Vanderbeck Junior, 1773), 18.

story of the Contugi *orviétan* privilege ends, ironically, in the august hands of a Paris Faculty Doctor.

*6. Conclusions*

Throughout the century-long period covered by these case studies, secrecy, branding, and legitimacy played changing roles in the maintenance of the Contugi family monopoly. The medical secret of *orviétan*, acquired through Christophe Contugi's marriage to Clarice, formed the historic root of the family business, but as time went on, branding—in the form of the "sign of the sun"—came to take on a greater importance as the family's claims to the medical secret of *orviétan* became more and more tenuous in the face of rival *orviétan* charlatans and later the published officinal recipes used by competing royal and urban apothecaries. The Contugi *orviétan* passed from being a full-fledged medical secret to being a medical brand, competing against other recipes and counterfeits. In some ways, the transition was inevitable: success breeds competition and imitation. The resolution of the 1685 conflict with the royal apothecaries demonstrates in high relief that by the second generation of the monopoly, Louis-Anne and his mother Roberte had realized that their litigation should focus on protecting their brand from imitators and ensuring the exclusivity of their privileged point-of-sale on the Pont Neuf. Further case studies of pharmaceutical monopolies in this period may be able to establish if the passage from the preservation of medical secrecy to an emphasis on protecting branding is related to larger processes of medical commercialization.

Approaches to legitimation also show interesting developments which are peculiar to the French context. In the absence of a *protomedicato* licensing charlatans, the Contugis appealed to royal authority for the right to sell *orviétan*. Although there can be

little doubt that a royal privilege was the best single source of protection and legitimation for a non-corporative pharmaceutical vendor in this periods, they were not without their limitations. A privilege gave vendors a foot to stand on, legally speaking, but litigation was still necessary to enforce their rights against interlopers. In this respect, they were like any Ancien Régime corporation: their privileges existed on royal parchment, but in practice they had to be upheld in the courts.

This form of legitimation-from-above clashed with existing practices of charlatans like Polony, who carefully documented their successes with notarized cure attestations and kept collections of approvals from a variety of local and provincial jurisdictions, critical to itinerant vendors who travelled regularly from place to place in search of new markets. Securing a royal privilege presented the theoretical advantage of transcending the judicial pluralism of a large and diverse kingdom, but in practice Christophe Contugi still encountered resistance from local charlatans and judicial authorities when he tried to actualize the kingdom-wide potential of his letters patent. Indeed, the Contugi-Polony conflict in particular can be read as a manifestation of the larger forces of centralization in absolutist France. Christophe Contugi, enjoying the support of royal privileges to distribute his *orviétan* throughout the kingdom, went on tour to register these privileges at the provincial level in order to extend his operation from the center in Paris to the periphery. His privileges afforded him this right, so long as he guarantee the efficacy of his *orviétan* before local magistrates. Logistically, the privileges also afforded him the option of delegating the distribution to subordinates, a potential which Dionis would later actualize. Polony, on the other hand, depended upon the local authorities in the Languedoc for legitimacy: he initially enjoyed the support of

the provincial Estates General and of the recently rehabilitated Frondeur, Conti, who had taken up residence in the Languedoc. In the light of these difficulties, the family appears to have become entrenched in Paris—itself a sufficiently lucrative market—and it was not until the 1760s that Dionis was able to extend a centralized operation across France.

Indeed, the role of the Paris Faculty within the story of *orviétan* is one of its most surprising features. Rather than adversaries, Faculty doctors were allies in several of the family's struggles. Charlatans and apothecaries, not Faculty doctors, were the main rivals of the Contugis both in the marketplace and the courts. Indeed, Christophe Contugi looked toward Faculty physicians as potential allies and legitimators; Faculty doctors themselves, from De Gorris to Andry and culminating with Dionis, saw something to gain from collaborating with vendors of proprietary remedies like the Contugis.

The century-long story of the Contugi *orviétan* provides an excellent illustration of the difficulties inherent in maintaining a multi-generational familial medical monopoly in Ancien Régime France. Privileges provided a basis of legitimacy, but had to be assiduously defended. Medical secrets were subject to being revealed, drugs and their brands could be counterfeited, and ensuring the transmission of legal rights and property through the rocks and shoals of generational succession presented the same problems to familial medical-monopolists as it did to the rest of society. The Contugi family also provides a useful background for the two following case studies. The Helvétius and Guiller-Lajutais families would also base their fortunes on a royal privilege granting them a pharmaceutical monopoly throughout the kingdom of France. But both would go a step further than the Contugis: they saw that, besides being a legitimator, the state could also become their chief customer.

## Chapter 4

## The Helvétius family and the transformations of ipecacuanha: The royal court, the army, and state-sponsored charity, 1688-1805

On August 23, 1688, Adrien Helvétius (1662-1727) was granted a fifteen-year monopoly privilege for the sale of his *Remède spécifique contre le cours de ventre, le flux de sang, et la dysentérie* ("Specific remedy against bowel runs, bloody flux, and dysentery"). Helvétius received this privilege following a series of patient trials he undertook the year before at the Paris Hôtel-Dieu, under the supervision of two royally-appointed commissioners. Initially, the hospital's staff and administration were not willing to grant Helvétius access to their patients: it took not one but two letters from no less than the Marquis de Seignelay—Secretary of State for the Navy and for the Royal Household and son of the famous Jean-Baptiste Colbert—to enforce their compliance.[1] The first of these was written to the governing council (*bureau*) of the hospital, while the second was addressed personally to one of this council's most prominent members, Nicolas Potier de Novion, *Premier président* of the Paris Parlement. In this letter, Seignelay expressed his hope that following successful trial results—which seemed likely given Helvétius' reputation—the remedy might provide a great relief to poor patients suffering from bloody flux and dysentery in the hospitals, as well as the sailors of Louis XIV's ever-growing navy. Helvétius had apparently informed Seignelay that he had not yet been allowed access to the hospital, and the letter concludes with the following warning: "His Majesty orders me to write to you that he desires that you assist [the

[1] AN O[1] 31 fol. 136v, Seignelay to the Administrators of the Hôpital général and the Hôtel-Dieu [in duplicate] (July 15, 1687); and fol. 142r, Seignelay to Potier de Novion, (July 19, 1687).

king's] good intentions in these matters, and that if you have any difficulties in doing so that you take the trouble to let me know about them so that I might inform him."[2]

Faced with this implicit threat, the hospital complied.[3] Like other hospitals, the Hôtel-Dieu was primarily a charitable religious institution, and had good reason to suspect an ambitious physician like Helvétius, interested as he was in testing drugs on patients. Three months later, its records show that a confrontation occurred after Helvétius attempted to remove a patient from the hospital who was on point of death and had been given his last rites. Helvétius boasted that he could save the man and that he would have him fed and cared for in a private room, but the nuns and the spiritual director of the hospital refused to permit it out of fear that the man would die while being transported.[4] The governing council for its part supported them in their refusal, but Helvétius once again went over their heads and appealed to Seignelay, who penned another letter, this time ordering the hospital to permit four patients—Estienne Ruisseau, Abel Noir, Charles Reguier, and Estienne Canon—to be removed and put under Helvétius' personal care.[5] It is unknown if one of these men was the dying man who had been served last rites, but the tests of Helvétius' remedy were deemed successful by the royal commissioners, and Helvétius was granted his exclusive sales privilege. This privilege marks the beginning of a sixty year relationship that Adrien Helvétius and his son would cultivate with the French state, supplying their patented dysentery specific and

[2] "Sa Majesté m'ordonne de vous escrire qu'elle désire que vous secondiez en cela sa bonne intention, et qu'en cas que vous y trouviez quelques difficultés vous preniez la peine de me les faire scavoir pour luy en rendre comte," Ibid., fol. 142r.

[3] AAPHP, Registres des délibérations du Bureau de l'Hôtel-Dieu, liasse 1438, no. 6436, fol. 129r (August 1, 1687).

[4] Ibid., fol. 172v (November 17, 1687).

[5] AN $O^1$ 31 fol. 235r, Seignelay to Administrators of the Hôtel-Dieu (November 17, 1687).

eventually a whole line of other pharmaceuticals to the army and state-sponsored poor relief projects.

Helvétius' letters patent granted him the right to "establish at his home and elsewhere whatever furnaces and laboratories that he sees fit," a provision which allowed him to produce large volumes not only of his *remède spécifique*, but also of "any other remedies that he is obliged to make for the healing of the sick and for the utility of the public."[6] These rights, coupled with his record of success in private practice among Parisian élites, ultimately furnished him with the necessary connections at court to present his remedy as a solution to the population-scale medical problems faced by the central administration of the French fiscal-military state. By 1690, Helvétius was supplying his drug to the French army in Alsace, and by 1706, he had expanded beyond his dysentery specific to produce an entire line of pre-packaged drugs. These were distributed with printed instruction sheets in standardized "medicine chests" (*boëtes de remèdes*), which travelled out to the provinces through the fiscal infrastructure of the French state—the intendants and their subdelegates—and were then distributed through the local charitable infrastructure of parish priests, village surgeons, and Daughters of Charity.[7]

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[6] "La faculté d'avoir chez luy et ailleurs tells fourneaux et laboratoires qu'il croira luy estre nécessaires tant pour la composition de son Spécifique, que pour tous les autres remèdes qu'il est obligé de faire pour la guérison des malades, et pour l'utilité du public," *Lettres patentes du Roy portant pouvoir au Sieur Helvétius Docteur en Medecine, de débiter seul ses remedes contre le Cours de ventre, le Flux de sang, et la Dyenterie, dans toute l'étenduë du Royaume* (Paris: Jean-Baptiste Coignard, 1688), 3r–v.

[7] The Daughters of Charity (*Filles de la Charité*), were an uncloistered women's religious order founded by Saint Vincent de Paul and Saint Louise de Marillac in 1633 and took annual (rather than perpetual) vows to serve the poor. They were largest female religious community in France by the eighteenth century and were particularly prominent in hospitals. See Colin Jones, "Vincent de Paul, Louise de Marillac and the Revival of Nursing in Seventeenth Century France," in *The Charitable Imperative: Hospitals and Nursing in Ancien Régime and Revolutionary France* (London: Routledge, 1989), 89–121; Matthieu Bréjon de Lavergnée, *Histoire des filles de la Charité, XVIIe-XVIIIe siècle : la rue pour cloître* (Paris: Fayard, 2011).

Despite the fact that their careers contain elements of considerable interest to historians of medicine, the military, and the state, Adrien Helvétius and his son and successor Jean-Claude Adrien (1685-1755) remain little-known. The literature on them is dwarfed in both depth and volume by that surrounding their famous descendant, Claude-Adrien Helvétius (1715-1771), the financier-turned-Enlightenment *philosophe* whose 1758 work *De l'esprit*, was met with public outcry for its supposed atheist materialism.[8] When he is mentioned at all in surveys of the history of medicine, Adrien Helvétius receives a paragraph or two, where he is typically presented as the "popularizer" of ipecacuanha, the South American root which formed the principal ingredient of his drug. In this respect his case is usually compared to that of Robert Talbor and cinchona.[9] Beyond acknowledgements of this "popularizing" role, the details of their medical careers remain almost completely unexplored.[10] Adrien and his son have, as of yet, been the subject of only a single monograph, that of Louis Lafond, *La dynastie des Helvétius*, published in 1926.[11] Lafond uncovered a number of important sources, most notably Helvétius' 1708 *mémoire* to the Controller General Desmaretz, where he petitioned to have a new office created, that of "Distributor General of Remedies"; his main goal, however, was not to contextualize Helvétius within the history of medicine but rather to set down biographical details of the family lineage leading up to the famous *philosophe* Helvétius and to reproduce, *in extenso*, important primary sources surrounding the family

[8] David W. Smith, *Helvétius: A Study in Persecution* (Oxford: Clarendon Press, 1965); David W. Smith et al., eds., *Correspondance Générale d'Helvétius*, 5 vols. (Oxford: Voltaire Foundation, 1981).

[9] See for example François Lebrun, *Se soigner autrefois : Médecins, saints, et sorciers aux 17e et 18e siècles* (Paris: Temps actuels, 1983), 75–76, 171–173; Paul Delaunay, *La vie médicale aux XVIe, XVIIe, et XVIIIe siècles* (Paris: Editions Hippocrate, 1935), 188, 220, 316.

[10] The best and most accurate summary currently available is that of Brockliss and Jones, *The Medical World of Early Modern France*, 233, 622–623, 730–731. Most of their information is drawn from the sole monograph by Lafond.

[11] Louis Lafond, *La dynastie des Helvétius. Les remèdes du Roi.* (Paris: Occitania, 1926).

lineage. As such, this chapter represents the first new account of Adrien Helvétius' career in ninety years, drawing upon previously undiscovered archival sources to contextualize his unique relationship as a medical supplier to the French fiscal-military state.

Helvetius also falls between the cracks of the broader history of medicine in this period. Although a prominent court practitioner, serving notably as a personal physician to the future Regent, he was never a member of the Académie royale des sciences, which stands as one of the main loci of historiography for this period. Likewise, recent accounts of the Louis XIV's personal health and "royal medical household" tend to privilege the king's first physicians and first surgeons, giving scant mention to figures like Helvétius, whose courtly orbits were slightly more distant from the Sun King and his successors.[12] Helvétius also comes too early to be included in histories of Enlightenment "proto-public health": although there is a sound basis for including him in such narratives, they tend to focus on the latter half of the eighteenth century, exploring the large-scale quantitative inquiries of organizations like the Société royale de médecine.[13] Intellectual historians of medicine would likewise find little material to dig into with Helvétius, as he left no major theoretical or empirical corpus in print. Although a collection of his and his son's manuscript *consilia* survives, most of his publications were all either short pamphlets on practical therapeutic questions and the "Mémoires instructifs" which accompanied his

[12] Alexandre Lunel, *La maison médicale du roi, XVIe-XVIIIe siècles. Le pouvoir royal et les professions de santé* (Seyssel: Champ Vallon, 2008); Stanis Perez, *La santé de Louis XIV: une biohistoire du Roi-Soleil* (Seyssel: Champ Vallon, 2007).

[13] Andrea A. Rusnock, *Vital Accounts: Quantifying Health and Population in Eighteenth-Century England and France* (Cambridge: Cambridge University Press, 2002), esp. ch. 4; Jean-Pierre Peter, "Une enquête de la Société royale de médecine : malades et maladies à la fin du XVIIIe siècle," *Annales. Histoire, Sciences Sociales* 22, no. 4 (1967): 711–51; Caroline C. Hannaway, "The Société Royale de Médecine and Epidemics in the Ancien Régime," *Bulletin of the History of Medicine* 46, no. 3 (1972): 257–73; Caroline Hannaway, "Medicine, Public Welfare and the State in Eighteenth Century France: The Société Royale de Médecine of Paris (1776-1793)" (Dissertation, Johns Hopkins University, 1977).

packaged drugs.[14] His only book-length publication was the *Traité des maladies les plus fréquentes et des remèdes specifiques pour le guérir*, first published in 1703, and subsequently reissued in dozens of editions throughout the eighteenth century. The *Traité des maladies* is a field-guide to medical diagnosis and treatment, classing diseases in simple clinical terms and explaining how to treat them with his proprietary remedies. A copy of the *Traité des maladies* accompanied the single-sheet "Mémoires instructifs" in each chest he sent out to the provinces and army hospitals.[15] Finally, although historians of the French state under Louis XIV would be the most likely to encounter the considerable archival record of Helvétius' shipments to the French provinces, most have not as of yet turned their attention to the medical dimensions of the fiscal-military state that I outline here, and in which Helvétius played a critical role.

Although Helvétius is remembered primarily as the "popularizer" of the use of ipecacuanha against dysentery in Europe, his *remède spécifique* was much more than the South American root which forms its main ingredient. In this chapter, I argue that Helvétius' mature *remède spécifique* of circa 1710 was in fact the product of a series of profound material, intellectual, and organizational transformations. I describe each of these in the following sections of this chapter: (1) the first transformation I describe is

[14] On Helvétius' *consilia*, see Joël Coste, *Les écrits de la souffrance : la consultation médicale en France (1550-1825)* (Ceyzérieu: Champ Vallon, 2014), 35–36, 58, 169–172, 176. See BIUS Ms 2075, "Consultations de médecine," XVIIIe siècle, 718 p. (see esp. pp. 1–88 for Jean-Adrien Helvétius); and BIUS Ms 5017, "Mélanges," XVIIe siècle, 125 fols. (see esp. fol. 21–80 for Helvétius' consilia). Some of these consilia are transcribed in Coste, *Les écrits de la souffrance*, 219–227.

[15] With the possible exception a short three-page pamphlet on administering cinchona to the poor published in 1686 and often attributed to him, Helvétius has no signed publications before his 1688 *Méthode*. The *Méthode* was the instructions which accompanied the first version of his drug and were printed in the same pamphlet as his letters patent. His only book-length publication is the 1703 *Traité des maladies les plus fréquentes*, subsequently reissued in dozens of editions. The remainder of his publications are short "Mémoires instructifs" for the various drugs included in his physic chests which closely match those of the *Traité* (a copy of which was included in each chest), and a host of short practical pamphlets on curing different conditions: these include his 1691 *Lettre sur la nature et la guerison du cancer*, the 1694 *Methode pour guerir toute sorte de fievres, sans rien faire prendre par la bouche*, the 1697 *Traité des pertes de sang*, the 1710 *Methode pour traiter la Verole*, and the 1721 *Remedes contre la peste*.

that of Helvétius' himself: over two decades, he went from being a reputedly unscrupulous upstart to respected court physician. (2) This is followed by intellectual and material changes that transformed ipecacuanha root from a dangerously violent emetic to a medicinal specific against dysentery. (3) The third is a question of scale, which transformed the *remède spécifique* from a drug targeted to individuals into one which could be mobilized to treat entire populations in the French army hospitals of Alsace in 1690. (4) This was followed by the transformation of its accompanying usage instructions from what we might call a printed "simulation" of medical judgement into a simple, easy-to-use set of instructions that could be comprehended without any prior medical training. (5) Finally, the last section of this chapter will explore the compound result of all of these transformations by showing how they converged around 1706 to produce one of the world's first state-sponsored mass-distribution systems for medicines.

1. *From the "beardless Asclepius" to the respectable "Médecin Hollandois"*

By the time Helvetius first got his hands on ipecacuanha root in the early 1680s, it had already been known for over forty years in Europe as an exotic emetic, remarkable primarily for the sheer violence of its action. By the end of the decade, however, it would be newly recognized as a medicinal specific against fluxes and dysentery. Who was Adrien Helvétius and how did he first come across the Brazilian root which would bring him—and later his son—such wealth, fame, and opportunity?

The answer depended on who was asked. To the Paris Faculty doctor Jean Bernier, he was "the Beardless Asclepius," a young charlatan—only 26 when he received his royal privilege—who had gained a reputation and a clientele that were far beyond his

years and learning.[16] Bernier underlined his reputation for experimenting "on worthless souls" (*in vili anima*).[17] To the celebrated memoirist Saint-Simon, by contrast, Helvétius was "a big Dutchman" (*un gros Hollandois*), as well as "a good and honest man" recognized for his charity—all this despite the fact that he was "the horror of Fagon" and was held in disdain by all the physicians because was allegedly an empiric without a degree (an unfounded rumor, as we shall see).[18] Indeed, opinions on Helvétius appear to have changed as he rose in Parisian society, even among individual authors: the social commentator Bonaventure d'Argonne, for instance, presented Helvétius' rise to fame in an almost picaresque mode in his 1699 *Mélanges d'histoire et de litterature*, but in a later 1713 edition, he retracted these statements and instead described Helvétius as having been a reputable physician from the start.[19]

The positive and negative accounts of Helvétius' rise to fame are likely two sides of the same coin. Their divergences can in part be reconciled by a look at the supply and demand of Helvétius' drug. On the demand side, we find patients who felt they were

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[16] Jean Bernier, *Essais de medecine, où il est traité de l'histoire de medecine et des medecins* (Paris: Simon Langronne, 1689), 473–476.

[17] The phrase, quite appropriate in this case (as well as the one recounted above) is taken by Bernier from Gilles Ménage, *Menagiana, ou Bons mots, rencontres agreables, pensées judicieuses, et observations curieuses* (Amsterdam: Adrian Braakman, 1693), 322: "Deux Médecins fesoient consultation dans la chambre de Muret. A prés avoir long temps discouru de choses et d'autres en Latin; ne croyant pas que le malade l'entendist, la conversation tomba enfin sur quelque nouveau remède dont on n'avoit pas encore fait d'épreuve. L'un dit à l'autre, *Faciamus periculum in anima vili*. Alors Muret se levant sur ses genoux, dit : *Vilem animam appellas pro qua Christus non dedignatus est mori*?" We know Bernier was a reader of Ménage from his *Anti-Menagiana: où l'on cherche ces bons mots, cette morale, ces pensées judicieuses et tout ce que l'affiche du Menagiana nous a promis* (Paris: d'Houry, Langronne et Osmond, 1693), see 52 for his critique of this specific epigram, which he deems to not be out of character for the humanist Marc-Antoine Muret (1526-1585), but which he found appropriate enough to characterize Helvétius' treatment of the servant boy of a prominent cleric. The anecdote recurs in *Johnsoniana: Or, Supplement to Boswell* (London: John Murray, 1836), 229, although neither Ménage nor Muret is named; and the phrase is used by Thomas de Quincey in *Confessions of an English Opium Eater and Other Writings*, ed. Robert Morrison (Oxford: Oxford University Press, 2013), 231.

[18] Arthur Michel de Boislisle, ed., *Mémoires de Saint-Simon* (Paris: Hachette, 1879), 8:92–94.

[19] Bonaventure d'Argonne, *Mélanges d'histoire et de littérature recueillis par M. De Vigneul Marville*, vol. 1 (Rotterdam: Elie Yvans, 1700), 38–41; Bonaventure d'Argonne, *Mélanges d'histoire et de littérature recueillis par M. De Vigneul Marville. Nouvelle édition, revûë, corrigée, et augmentée*, vol. 1 (Paris: Claude Prudhomme, 1713), 49–54.

cured and amply praised and rewarded Helvétius, facilitating his rise to courtly medical practice and ultimately helping him attain lucrative government contracts. The health of these patients, as well as Helvétius' continued success, depended on maintaining a steady supply of the exotic plant that formed the indispensible basis for his drug: ipecacuanha. With this in mind, it is hardly surprising that from the supply side, Helvétius came over time to be reviled by the merchants and apothecaries who provided him with ipecacuanha and who, upon witnessing his ever growing rewards, could not help but feel that they had been swindled. Their negative accounts were told and retold with gusto by Paris Faculty doctors like Bernier, who resented Helvétius' success and suspected that his wonder drug was not a lasting cure to dysentery, much as cinchona offered only fleeting relief from intermittent fevers.

These disparate accounts of Helvétius' rise to fame agree on at least two points. The first is that Helvétius was a foreigner, naturalized French but Dutch by birth.[20] The second is that he built his fame on ipecacuanha. Although it is not the goal of this section to provide a full biography of Adrien Helvétius, it is nonetheless useful to begin with a few details on his origins and family.[21]

There is also a chronological dimension to Helvétius' reputation, which stands out particularly in the radically different accounts provided by Bonaventure d'Argonne. The rumours of unscrupulous business practices that surrounded Helvétius in the 1680s

[20] For the family genealogy see David W. Smith, ed., *Correspondance générale d'Helvétius*, 5 vols. (Oxford: Voltaire Foundation, 1981-1998), 5:115–118; for biographical details on Johann Friedrich, see R. Krul, "Jean-Frédéric Helvétius et sa famille," *Janus* 1 (1896): 564–71; R. Krul, "Haagsche en Amisfoortse Krukkendans. Bijdrage tot het leven van Johann Friedrich Schweitzer (Helvetius)," *Haagsch Jaarboekje*, no. 5 (1893): 4–32. It should be mentioned that the Helvetius family was not of Swiss descent, as his name might seem to suggest: the Latin name Helvetius dates from a sixteenth-century German ancestor who travelled to Switzerland and returned a Reformed preacher, and was thereafter known as "der Schweitzer."

[21] Lafond's 1926 account, the best currently available, has numerous errors and neglects several important sources.

receded over time as he becomes better and better connected at court, so that by the time we reach the accounts of Saint-Simon in 1701 and d'Argonne in 1713, he emerges as an honest and wholly respectable physician, noted for his charity to the poor and his success at court.

It is this first transformation—that of Helvétius and his reputation—that forms the basis of this section, and which sets the stage for the subsequent transformations of his drug, its instructions, and most importantly, the breadth of patients for whom it was intended. Paradoxical though it may seem, in order to supply his drugs to the bottom of the social hierarchy, Helvétius first needed to make his way to the very top: before he could send bulk shipments of his drug to soldiers and peasants, before he could even have it tested on patients in the Parisian hospitals, he first had to gain a reputation for success among an élite clientele.

Adrien Helvétius was the son of a famous alchemist, Johann Friedrich Helvetius (c. 1629-1709), known throughout Europe for his controversial eyewitness-account of transmutation, the *Vitulus aureus*, or "Golden Calf" (1667). Although born in Germany (Köthen, Anhalt) Johann Friedrich had studied medicine at Harderwijk and moved to Amsterdam and then The Hague to practice, eventually serving as physician to the Dutch Estates General.[22] His son Adrien was also a physician: against rumors that he was an empiric, Adrien always signed as "A. Helvetius D.E.M" (*Docteur en Médecine*). Several sources claim that Adrien was first schooled in medicine and "Operations Chimiques" by his father and that he subsequently studied medicine at the renowned University of

[22] Krul, "Jean-Frédéric Helvétius et sa famille," 569; d'Argonne, *Mélanges (1713)*, 1:49. There is no evidence that he was ever physician to William III.

Leiden, but his name is nowhere to be found in the Leiden matriculation registers.[23] He may of course have studied there informally, but in all legal documents, he designates the University of Reims as his alma mater, and the university's registers confirm he received the doctorate April 30, 1680, at the relatively young age of eighteen.[24] As Brockliss and Jones have noted, Reims was one of the less prestigious provincial medical faculties, and had a reputation for venality, often granting degrees to students who had undertaken most of their studies elsewhere.[25] Although Adrien was baptized protestant at the Reformed Kloosterkerk in The Hague, he professed the Catholic faith by the time he was naturalized French in 1684.[26] He maintained ties with his father at The Hague until the end of his life in 1709, a fact which enabled him to serve as a middle-man and diplomatic feeler on behalf of France during the War of the Spanish Succession (1701-1714).[27]

The second point on which all sources agree is that Helvétius was responsible for popularizing the use of ipecacuanha against dysentery. The earliest accounts, however, suggest that he acquired his supply of the root through less than scrupulous means,

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[23] Willem Nikilaas Du Rieu, *Album studiosorum Academiae Lugduno Batavae MDLXXV-MDCCCLXXV* (The Hague: Martin Nijhoff, 1875). Adrien's older brother, Johannes Balthasar, is listed for 1673 and 1675: see col. 581, 601. He graduated in 1678 and practiced in Amsterdam. Schweitzer, Sweitzer, and Zwetser (a spelling Johann Friedrich sometimes used) yielded no results for Adrien, however.

[24] Adrian Engelhardus Helvetius is listed as having received his doctorate in medicine from the University of Reims on April 30, 1680: see BM Reims, Bibliothèque Carnegie, ms.1085, Catalogus secundum litterarum ordinem digestus omnium eorum qui laurea apollinari coronati fuerunt in Academia Remensi, a natalibus Facultatis medicae, a die scilicet 21a anni 1550 ad diem destructionis Universitatum et Facultatum, 1794, labore Ludovici Hieronimi Raussin [Louis-Jérôme Raussin], professoris in dicta Facultate, ad usum proprium, p. 61.

On his degree, granted when Helvétius was scarcely 20 years old with no mention of a thesis title, see Lafond, *Dynastie* 21; Brockliss and Jones, *Medical World* 305.

[25] Brockliss and Jones, *The Medical World of Early Modern France*, 487, 493–494.

[26] AN $O^1$ 28, fol. 76, Lettres de naturalité pour Helvétius, médecin natif de La Haye en Hollande (March 1684).

[27] Louis de Rouvroy Saint-Simon, *Mémoires (1707-1710) Additions au Journal de Dangeau*, ed. Yves Coirault, vol. 3 (Paris: Gallimard, 1984), 393–394; Claude Frédéric Lévy, *Capitalistes et pouvoir au siècle des lumières.* (Paris: Mouton, 1969), 263–268. A substantial manuscript collection of Helvétiu' reports, dealing almost exclusively with peace and trade negotiations, has survived from this period: see BnF NAF 2041, "Recueil des lettres et mémoires du sr Helvétius sur les négociations qui se sont faites entre la France et la Hollande, avant la paix d'Utrecht, 1704–1711," 494 leaves.

although they differ on exactly who it was that he swindled. The most repeated story of Helvétius' rise to fame and fortune is Bonaventure d'Argonne's 1699 "picaresque" version. In this account, which d'Argonne later retracted, Helvétius first came to France, "a country where new remedies can easily engender new diseases," in order to enrich himself by selling his father's medicinal "powders." He had no luck doing so at first, and was soon pressed by necessity to return to Holland. His father equipped him with ever more proven powders and sent him back to France. His big break finally came while he served as an assistant to an established Parisian doctor named d'Aforti to heal an old druggist (who goes unnamed). The old druggist was saved through the ministrations of d'Aforti, and offered him five or six pounds of "Brazil root" (ipecacuanha), "as if it was a very precious thing." The doctor refused, preferring payment in gold, and so the root went to his assistant instead: Helvétius subsequently made a fortune on it, much to the consternation of Aforti, whose jealousy explains the subsequent disdain in which Helvétius was held by learned physicians.[28]

Although it continued to be cited in later accounts of Helvétius' career—most notably that of Louis Lafond, easily the most complete to date—this story was completely retracted by d'Argonne a decade later in the 1713 edition of the *Mélanges*. In this revision, D'Argonne even confesses to having "traded in false memoirs" on the introduction of ipecacuanha in France: "the story is indeed worth telling," he observes, "but this must be done in citing the facts, not in substituting them with fables."[29]

The new version of Helvétius rise to fame provides little information about his ipecacuanha supply, providing instead a litany of ever more important patients he cured,

[28] Argonne, *Mélanges* (1700), 1:39–40.
[29] Argonne, *Mélanges* (1713), 1:49.

establishing how he came to the attention of the French court. The first of these was his successful cure of M. de la Chabane, Councillor to the Parlement of Bordeaux, "who had been abandoned by four of the most famous doctors of the Paris Faculty."[30] Other successful cases followed: Helvétius treated M. Turet of the Saint-Sulplice Seminary, M. Tronçon, the Superior of the same seminary, and M. Jacques-Charles de Brisacier, Superior of the *Missions Etrangères* Seminary. These cures of prominent ecclesiastics marked the "beginning" of Helvétius' reputation, according to d'Argonne, and as we shall see in Chapter 6, laid the foundation for his relationship with the MEP (*Société des Missions Etrangères de Paris*), which imported Helvétius' drugs for use in their Southeast Asian missions.[31]

Despite such important successes, d'Argonne asserts that it was his work at the bedside of the Duchess of Chaulnes that truly established his fame in Paris.[32] The duchess rewarded him with a gift of one thousand *écus*, a pension, and secured for him the protection of Colbert.[33] This success may have more to do with his father's patronage links than his own record in curing prominent ecclesiastics: d'Argonne asserts that Helvétius was introduced to the bedside of the Duchesse de Chaulne through the intervention of Godefroi, Comte d'Estrades, who had kept Johann Friendrich Helvétius as a physician during his time as ambassador in Holland, and that he had honoured Adrien with "friendship and confidence" out of gratitude to his father.[34]

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[30] Ibid., 1:50.

[31] See below, ch. 6, sect. 2.

[32] Elisabeth de le Féron, the wife of the Governor of Brittany, Charles d'Albert d'Ailly, who protected the Louvre Capuchins. See above, ch. 3.

[33] Assumedly the elder Colbert, Jean-Baptiste, not his son Seignelay, who is called by that title later in the *Mélanges*. This would place these events before Colbert's death in 1683.

[34] d'Argonne, *Mélanges (1713)*, 1:51.

Helvétius' biggest break came when Monseigneur the Grand Dauphin, the eldest son and heir of Louis XIV, was attacked by dysentery. Daquin, the royal first physician, asked if the drug could be used "with certitude," and Helvétius offered to have it tested in the hospitals. At the same time, the King's Jesuit confessor, Père Lachaise, requested a supply of the drug to send with Père Bèze, a member of the Jesuit party that accompanied the 1687 French embassy to Siam.[35] Its effects were deemed to be so remarkable that Lachaise spoke of it to Louis XIV personally, who then ordered Seignelay to have it tested in the hospitals. It is the convergence of Helvétius' reputation among these courtly and ecclesiastic élites, facilitated by his own practice but also by his father's reputation, that likely explains how he came to the attention of the highest levels of French society, namely Lachaise and Louis XIV himself. The friction mentioned above between Helvétius and the Hôtel-Dieu staff is unsurprisingly omitted.[36]

The profound differences between d'Argonne's 1699 and 1713 accounts testify to the important change in Helvétius reputation that had occurred in the interim. In 1699, there was still enough rumour and scepticism surrounding Helvétius that d'Argonne could describe him as a kind of medical picaro, clever but sometimes unscrupulous, sent by his alchemist father to make his own fortunes in a foreign land. By the time of the revised account, written with the benefit of hindsight, he was cast as a respectable physician from day one, and his success was explained through reference to his practice among a steadily rising clientele in Paris.

[35] Once again, see below, ch. 6, sect. 2.

[36] Argonne, *Mélanges* (1713), 49–53. D'Argonne also states that Helvétius confessed to Daquin that his remedy was ipecac, and though Daquin didn't know of its usefulness in cases of dysentery, he owned a box of ipecac, which had been given to him by Monsieur Guenegaud, former ambassador to Portugal.

Other early references likewise suggest that Helvétius had a reputation as a crooked businessman. Nicolas Lémery, for example, observes in the entry on ipecacuanha in his 1698 *Traité des drogues simples* that Helvétius bought a supply of the root from an apothecary named Craquenel. This apothecary had tried it on some patients (assumedly as an emetic) but found it problematic: not knowing its value, he kept the root in an attic. Lémery likewise confessed that he himself had received a sample of the root from a physician named Gras, who had travelled back from the Americas with it in 1672, and had presented it to the academy of the Abbé Bourdelot. Lémery even observed that he once had the opportunity to secure a large supply of it, but was uninterested in doing so: "as I had no experience of it at that time, I did not want to buy it, and have regretted it since."[37] Helvétius, however, bought it and made very successful use of it, "making a great secret of this remedy, until the king had the goodness to make it public." [38] Lémery does not directly underline any injustice in this, but others, such as Bernier, did: "How could that root not be charmed for the Merchant Physician [Helvétius], having sold at twelve *écus* what had not cost him even half an *écu*, after having seized a monopoly to the prejudice of the good faith which ought to reign among merchants?"[39] Bernier also describes two occasions on which Helvétius brought lawsuits against fellow Parisian physicians who had procured ipecac, in order to protect his exclusive privileges. In the first case, a physician bought a few pounds of ipecac from an abbot at a fair price only to find himself faced with unreasonable terms from Helvétius. The affair was then brought

[37] "Comme alors je n'en avois veu aucune experience, je ne voulus point l'acheter, de quoy je me suis repenti depuis," Nicolas Lémery, *Traité universel des drogues simples* (Paris: L. d'Houry, 1698), 388.

[38] Ibid.

[39] "Comment cette racine ne seroit-elle pas maudite pour le Medecin Marchand, ayant vendu douze écus ce qui ne lui coûtoit pas un demi, après s'en estre emparé par un monopole, et au préjudice de la bonne-foy, qui doit regner entre les Marchands?" Jean Bernier, *Supplémens au livre des essais de médecine* (Paris: Simon Langronne, 1691), 86.

before justice, and the unnamed physician would have been ruined had he not been counselled to settle with Helvétius. In the second case reported by Bernier, a merchant brought a hundred pounds of ipecac to Paris and found himself faced with a criminal lawsuit—plotted and conducted by a bailiff (*huissier*) that was an accomplice of Helvétius—which landed him in prison. Like the physician, the merchant was advised by "un certain particulier" to accommodate Helvétius, which he did in order to secure release.[40]

This last rumor is corroborated by a sequence of legal disputes between Helvétius and Jean-Augustin Garnier, a hatter by trade who had business connections in Cadiz which he used to import ipecacuanha to France on Helvétius' behalf. In 1689, shortly after Helvétius' was granted his letters patent, Garnier sued Helvétius in the *Parc civil* of the Châtelet, on the grounds that Helvétius had coerced him into accepting a low rate of compensation for the sixty pounds of ipecacuanha he had already supplied, as well as for an additional twenty-five pounds he was contracted to supply. [41] The Châtelet case was settled in Helvétius' favour by default, a decision which Garnier subsequently appealed at the Paris Parlement.[42] In his testimony, Garnier argued that Helvétius took advantage of him while he was imprisoned for unrelated debts. The shipment of ipecacuanha arrived while he was in prison, and Helvétius visited him and offered to pay both his bail and his debts, on the condition that Garnier grant him immediate access to the ipecacuanha, which was being held. Garnier confessed that he had foolishly taken Helvétius to be an

[40] Ibid. Bernier was careful to never mention Helvétius by name in his account, calling him instead "the Beardless Asclepius," but the references to ipecacuanha make his identity quite clear.

[41] AN Y 638, Châtelet, Parc civil (Tuesday September 6, 1689).

[42] Most of what follows draws from the detailed testimony of the case recorded in Nicolas Nupied, ed., *Journal des principales audiences du Parlement, 1685-1701. Tirez de Memoires de M. François Jamet de la Guessière*, vol. 5 (Paris: François Le Breton, 1707), 421–422.

honest man, and thus never asked to have this agreement in writing. Released on bail, Garnier granted Helvétius access to the ipecacunha, but once he had it in hand, Helvétius refused to loan Garnier the money to pay his debts, or to pay the agreed upon sum for the root. Worse yet, as Garnier tells it, he was then arrested by a *huissier* and an armed posse of other officers of the law, who brought him to "a low and very dark room," and told him to sign a new contract with Helvétius, accepting a lower rate of compensation: if he refused, he was made to understand that he would be thrown into the Bastille, under a trumped up charge of counterfeiting the king's coin.[43]

Garnier argued that this contract was invalid because it was extorted under duress (*par crainte et violence*), and that he was the one who had in fact introduced Helvétius to ipecacuanha in the first place, providing him with his earliest samples of the drug as well as vital information on its use from his contacts in Cadiz.[44] Helvétius for his part argued that Garnier's lurid tale of greed and coercion was pure fantasy, that the notary's minutes contained no evidence that any earlier contract had been rescinded, and that Garnier had even provided him with a receipt after he paid the agreed sum. Helvétius further argued that he had known about the plant long before he had ever contracted Garnier to supply it: as evidence he produced patient cure attestations which demonstrated he had been curing cases of dysentery as early as 1684, and pointed out that the plant was described in print over twenty years earlier by an unnamed Dutch physician.[45] Despite Helvétius' insistence on these points, rumors based on Garnier's testimony would float around for years to

[43] Ibid.

[44] According to Garnier, the threat met the legal definition of extortion because it was "sufficient to frighten even a steadfast man" (*ut posset cadere in constantem virum*): he was made to believe he was about to be thrown in the Bastille, and violence was manifest, as he had been removed by archers and put in a prison. An obligation made *in vinculis* (in chains) was null and void.

[45] See below, notes 44 and 45. Nupied, *Journal des principales audiences du Parlement*, 5:422.

come: the anonymous reviewer of Helvétius' *Traité des remèdes* in the 1704 *Mémoires de Trévoux* observed, "It is surprising that there are still those who would steal the glory of this discovery from Helvétius, to give it to a merchant-hatter, named Garnier," who, "pushed on by the enemies of this Author [Helvétius], dared to claim that the public owe the discovery of this specific to him." *Mémoires de Trévoux* review claimed that Garnier was later condemned at the Châtelet and Parlement, and reduced to confessing his slander against Helvétius.[46]

The Parlement's final ruling favoured Helvétius: Garnier's appeal was dismissed and he was ordered to content himself with the agreed rate of reimbursement from Helvétius for the sixty pounds of the root that had already been delivered.[47] As a token compromise, however, the Parlement ruled that Garnier should not be obliged to supply the final twenty-five pounds of the root. Garnier reported that Louvois, the War Minister, had recently ordered him not to sell the root to anyone but the army, and on top of this, it was very unlikely he would be able to get any from Cadiz given the state of war then between France and Spain, which held the two sources of the root—Brazil and Peru—within its dominion.[48] This conflict, the War of the League of Augsburg or Nine Years War (1688-1697), would later play a considerable role in Helvétius' fortunes.

The common theme in the accounts of d'Argonne, Bernier, Lémery, and Garnier is that the other actors—including physicians, apothecaries, and merchants—did not appreciate the potential value of ipecacuanha root, while Helvétius did, and went on to

[46] "Il est surprenant qu'il se trouve encore des personnes qui luy veulent enlever la gloire de ce découverte, pour la donner à un Marchand Chapelier, nommé Grenier (sic) […] cet homme, poussé par les ennemis de cet Auteur [Helvétius], osa divulger que le public luy devoit la découverte de ce spécifique, imposture qui ne se soutint pas long tems, car ayant été mis en cause, il ut condamné au Châtelet, et au Parlement par Jugements extraordinaires, et fut réduit à avouer pour excuser sa calomnie, qu'il ne l'avoit publié qu'apres avoirété suborné." *Mémoires de Trévoux* (April 1704), 561.

[47] AN $X^{1A}$ 6481, Paris Parlement, Grand chambre, Plaidoiries, fol. 115r-v (May 30, 1690).

[48] Nupied, *Journal des principales audiences du Parlement*, 5:422.

make a fortune using it. These other actors not unreasonably felt as though they had been swindled, selling their ipecacuanha too cheaply due to the information asymmetry between them as suppliers and Helvétius as a buyer. These accounts also demonstrate that ipecacuanha was available in France by the time Helvétius arrived on the scene, but no one was yet aware of its virtues against dysentery.

2. *From emetic to specific: Transforming ipecacuanha into the remède spécifique*

In keeping with the usual secrecy that served as a bulwark for privileged medical monopolies, ipecacuanha root is named neither in Helvétius' printed letters patent nor in his initial instructions on how to administer the drug, the 1688 *Méthode*. Despite this, it seems likely that the secret was out before long: Garnier and other suppliers were quick to draw the link between Helvétius purchasing ipecacuanha from them and his subsequent successes in curing dysentery, and their public disputes with Helvétius likely helped spread the word. Here it should be remembered that knowing the identity of a botanical simple is not coterminous with a full knowledge of the drug of which it forms the critical component: this must also include the method of processing and compounding, instructions for administration and dosage, and pharmacological reasoning about its effect within the patient's body. Consequently, this section explores the material and intellectual dimensions of how Helvétius transformed ipecacuanha from an emetic into a medicinal specific against dysentery.

The first step in this transformation must have been Helvétius' suspicion that the plant had a discernible effect on patients suffering from dysentery. Helvétius nowhere provides an account of a "eureka" moment, but if we take him at his word in his testimony to the Parlement, it seems that he was already aware of it by 1684. What was

known about the root in Europe at that time? How did Helvétius first become aware of it, and why did it stick out to him, amongst the panoply of other plant substances, both indigenous and exotic, that were available in Paris at the end of the seventeenth century? How did he go from seeing it as an emetic to seeing it as a specific?

Here at least we can rely on Helvétius' own statements: in his 1688 testimony before the Parlement, he says he first learned of ipecacuanha from the work of a "Dutch physician" who had published a description of it more than twenty years earlier. In his 1703 *Traité des maladies*, he goes even further, naming the author as "L'illustre Pison, Médecin d'Amsterdam," namely Willem Piso (1611-1678).[49] The work in question, *De medicina Brasiliensi*, printed alongside the natural historic work of his colleague Georg Marggraf as part of the *Historia naturalis Brasiliae* (1648), was produced following the two men's participation in Governor Johann Maurits' exploration and colonization of Dutch Brazil (Recife) under the auspices of the Dutch West India Company.[50] The book includes the first printed description and illustration of ipecacuanha, although there is evidence that it was known to Europeans at an earlier date. The first European to document its properties was probably Manoel Tristão, a lay brother serving as an apothecary at the Jesuit college in Bahia, Brazil, down that coast from Recife. Tristão documented it in a manuscript recipe collection some time before 1625, which made its

[49] Adrien Helvetius, *Traité des maladies les plus fréquentes et des remèdes spécifiques pour les guérir, avec la méthode de s'en servir pour l'utilité du public et le soulagement des pauvres* (Paris: Laurent d'Houry and Pierre-Augustin Le Mercier, 1703), 263–264.

[50] Willem Piso and Georg Marggraf, *Historia naturalis Brasiliae. De medicina Brasiliensi libri quatuor. Historiae rerum naturalivm Brasiliae libri octo.*, ed. Johannes de Laet (Leiden and Amsterdam: Franciscus Hackius and Ludovicus Elzevirius, 1648); Willem Piso, *História natural do Brasil ilustrada*, trans. Alexandre Correia (São Paulo: Companhia Editora Nacional, 1948).

On Piso see Amy Buono, "Interpretative Ingredients: Formulating Art and Natural History in Early Modern Brazil," *Journal of Art Historiography*, no. 11 (2014): 1.

way into the hands of Samuel Purchas,[51] and as Piso himself acknowledges, its virtues let it to be "preserved religiously by the Brazilians, who were the first to reveal its virtues to us."[52]

Piso describes ipecacuanha root primarily through reference to its purgative faculty, which evacuates "by above and below," but also adds that it acts against venom or poison (*venenum*), and that it is the "easiest remedy to find" in Brazil for many diseases arising from "long obstructions," including fluxes of the bowels (*fluxus ventris*).[53] He also distinguishes between the two species of ipecacuanha, the brown and the white, which differ in their grades and faculties, as well as in where they grow. Although he does refer to bowel flux, Piso does not use the term dysentery (*dyssenteria*) or refer to specifically "bloody" (*sanguineus*) flux in his entry. The description tends toward natural history and practical therapeutics, providing little in the way of pharmacological reasoning, with the exception of the second-to-last passage, which observes: "Indeed, besides the bowel flux, it cures other diseases, opposes venoms, and it expels poison immediately through vomit, either by occult or by manifest qualities."[54] The very suggestion of an occult quality may have captured Helvétius' attention. As we have seen in Chapter 2, occult qualities and substances which act *tota substantia* provided a critical antecedent for subsequent iatrochemical theories of how medicinal specifics could serve as counter-ferments which could act radically against the disordered process of fermentation which produced a given disease. Piso's point that the root also acts

[51] Samuel Purchas, *Hakluytus posthumus, or Purchas his pilgrimes* (Glasgow: Maclehose 1905-1907 orig. 1625), 16:417, 478. Further details in Leite 1938-50, 8:133-134, 9:167. For all of this see Jarcho, *Quinine's Predecessor* 306 n. 2.

[52] "Quamobrem religiose à Brasiliensibus reservatur, qui illius virtutes primi nobis revelarunt," Piso and Marggraf, *Historia naturalis Brasiliae*, 102.

[53] Ibid., 101–102, Cap. LXV, De ipecacuanha, eiusque facultatibus.

[54] "Praeterquam enim quod fluxibus ventris, aliisque morbis medeatur, venenis adversatur, virusque, tum occulta qualitate, tum manifesta, per vomitum statim expellit," Ibid., 102.

"against poisons" likewise recalls the action of antidotes, which offered a foundation for an alternative pharmacology that moved away from traditional conceptions of expulsion and repletion common in Galenic therapies.

In the *Traité des maladies*, Helvétius even disagrees with some of Piso's assertions, most notably pointing out that it does not appear to be effective against poison "in these countries" (Europe), "although some allege that it serves as one in the Indies," and instead proposes that "it specifically cures" (*elle guerit spécifiquement*) bowel fluxes including dysentery, alongside its more well-known faculty of provoking vomiting.[55] A conceptual shift is discernible in these corrections: from Helvétius' perspective, Piso had seen faculties in ipecacuanha which defied traditional pharmacological reasoning on manifest qualities, and instead seemed occult or antidote-like. Lacking the notion of a medicinal specific, Piso was either confused about the root's action, or was referring to effects which were unique to the climate or poisons of the tropical Brazilian climate.

In both the references to occult qualities and antidote-like action, Helvétius may have seen in ipecacuanha a close analogue to current discussions surrounding medicinal specifics like cinchona, which had been popularized in Paris by Robert Talbor just a few years earlier. Indeed, signs of such a reading are apparent in a passage of the 1688 *Méthode*, notably in his use of cinchona as an exemplar in defense of his view that he had found in ipecacuanha another medicinal specific:

> I confess that it is difficult enough to understand how a remedy can act with equal success on patients of diverse temperaments, in different states, attacked by a disease that has different types and which does not always come from the same cause. But if no one presently disputes the virtue of Cinchona, and if this remedy has been received as universal by all physicians, *then it should not seem so extraordinary that another specific should be encountered*, and that, matching the other in scope, this one

[55] Helvetius, *Traité des maladies* (1703 ed.), 264.

> should be just as sovereign in all species of bowel flux, as that foreign bark is for all the intermittent fevers.[56]

He also added that this new specific had an advantage over cinchona, namely, that it cured without relapses. In sum, the conceptual shifts in chymical medicine that had occurred in the decades since Piso had published his work, as well as the popularisation of cinchona in the 1680s, both converged to offer Helvétius a new pharmacological category in which to place ipecacuanha, namely, that of the medicinal specific.

In addition to reframing the root in pharmacological terms, Helvétius also had to contend in a material sense with its recognized emetic faculties. As he observes in his *Traité*, upon realizing its use as a specific against dysentery, "I applied myself particularly to determining the proper dosage, to correcting the violent effects of the vomiting, and to making this root more purgative through a preparation whose use is at once gentle and easy."[57]

As with most secret remedies, no recipe for the *remède spécifique* survives, and Helvétius' own writings offer only a few hints as to how he transformed raw ipecacuanha root into a drug against dysentery. Despite these limitations, it is still possible to offer informed speculation on how Helvétius produced his remedy by looking at the work of one of his contemporaries, the apothecary Simon Boulduc (1652-1729), member of the

[56] "J'avoüe aussi qu'il est assez difficile de comprendre comment un même remede peut agir avec un succès égal, sur des malades de divers temperaments, en diferens états, attaquez par une maladie qui a differentes especes et qui ne vient pas toûjours de mesmes causes. Mais si personne ne dispute presentement de la vertu du Quinquina, et si ce remede est reçu comme universel par tous les Medecins, il ne doit par paroître si extraordinaire qu'il se rencontre un autre Specifique, qui égalant celui-là en son étenduë, soit aussi souverain dans toutes les especes de Flux de ventre, que cette écorce étrangères l'est pour toutes les fièvres intermittentes," Helvétius, *Méthode* (1688) 17-18. Emphasis added.

[57] "Je me suis particulièrement appliqué à en régler la juste Dose, à corriger les effets violents du Vomissement, et à rendre cette Racine plus purgative, par une préparation dont l'usage est doux et facile," Helvetius, *Traité des maladies (1703 ed.)*, 264.

Académie royale des sciences.[58] Boulduc undertook a series of chemical analyses of the two varieties of ipecacunaha, publishing his results in a series of short articles in the 1700 and 1701 *Mémoires de l'Académie royale des sciences*.[59] These analyses were the continuation of a larger Académie project of analysing plants, initiated in 1668 when they were placed under the direction of Samuel Cottereau Duclos. The broad goals of this project extended from the natural philosophic—determining the constituents of plants to find support for divergent matter theories—to the practical, in the sense of improving pharmaceutical preparations.[60]

In oblique terms, without naming any parties, Boulduc explains that although the plant has been known reasonably well in Europe for decades, its reception has been hampered by "negligence and incredulity," in the form of various "doubters" who prefer to use a narrow set of tried-and-true remedies, and by the "timidity" of practitioners who have been scared away by the root's apparent violence as an emetic. Thankfully, these factors have not succeeded in stopping practitioners who were "more entrepreneurial" (*plus entreprenans*) from recovering ipecacuanha and other plants from oblivion, clearing the way for current usage of the plant and all the advantages it offered to the public. For Boulduc, the case of Helvétius shows that "A reasonable boldness, joined with a

[58] On Boulduc's origins and career, see David J. Sturdy, *Science and Social Status: The Members of the Academie Des Sciences 1666-1750* (Woodbridge, Suffolk: Boydell Press, 1995), 244–248.

[59] Simon Boulduc, "Analyse de l'ypecacuanha," *Mémoires de l'Académie royale des sciences*, January 8, 1700, 1–5; "Observations sur les effets de l'ypecacuanha," *Mémoires de l'Académie royale des sciences*, November 12, 1701, 192–94. Thanks to Lawrence M. Principe for bringing these sources to my attention.

[60] Alice Stroup, *A Company of Scientists: Botany, Patronage, and Community at the Seventeenth-Century Parisian Royal Academy of Sciences* (Berkeley: University of California Press, 1990), esp. 89–102.

mediocre knowledge, is more useful for discovery than profound science accompanied by too much slowness and timidity."[61]

Boulduc's main interest is in identifying "what principle, or what part of the mixt" is associated with its specific virtue against flux and dysentery. Like Piso, Boulduc begins by distinguishing the different types of ipecacuanha: namely the grey and the brown. He believes the brown is better and more certain against dysentery, but notes that the grey is favoured in usage because its emetic effects are less violent. He employs two methods of analysis: ordinary distillation and solvent extraction.[62] Distillation provided him with "peu de lumières" on the plant, offering little insight into mixed matter as it is normally, instead only presenting it in a destroyed form. Boulduc argues that he could have omitted it altogether and been just as well off in his analysis. This is a manifestation of a larger phenomenon in this period, namely, the decline of analysis by fire, and the growing preference among chymists for solvent extraction.[63]

A double-solvent extraction yielded much more interesting results: the first solvent Boulduc used was spirit of wine, in order to extract the sulphurous or resinous parts; the second was distilled rainwater, to extract the salt, Boulduc being "very persuaded that the virtue of this root does not reside in the resin alone, but again in its saline parts, which the spirit of wine could not bite into, and for which water alone is the

[61] "Une raisonable hardiesse jointe à une connoissance mediocre, est plus utile pour les découvertes qu'une science profonde accompagnée de trop de lenteur et de timidité," Boulduc, "Analyse de l'ypecacuanha," 3.

[62] Ibid. Boulduc adds also that there is also a "white ipecacuanha," but that this is not really another variety of ipecacuanha, having very little effect, and which is used for pregnant women and small children

[63] Fredric L. Holmes, "Analysis by Fire and Solvent Extractions: The Metamorphosis of a Tradition," *Isis* 62 (1971): 129–48.

proper solvent."[64] Boulduc applied his two stage solvent extraction to both the brown and the grey ipecacunaha, evaporating the solvent after each stage and weighing the extract. In both cases, he found that the grey yielded more of the extract, and left less solid residue.

But which of these extracts was associated with the anti-dysenteric virtue of the root? The published version of the *Mémoires* includes no description of his patient trials, instead only furnishing his conclusions; the corresponding notice in the *Histoire de l'Académie royale des sciences*, specifies concerning the extracts that "M. Boulduc tested them on several patients with all necessary precautions, and faithfully reports the results."[65] But if we turn to the manuscript *procès-verbaux*, we learn a great deal more: there Boulduc describes eight patients, including two male and six female. With the exception of a single 25-year-old woman, all of his trial subjects are all either younger than 15 or older than 60, and all suffered from flux or dysentery.[66] Boulduc was not able to apply a uniform method in each case, but he carefully details the specific circumstances of each patient, the course of treatment over time, and the effects it had on the patient's condition. In most cases, his tests were geared at delineating the different effects of the first extraction and the second extraction. In one case, he gave a 60-year-old woman the second extract, which improved her condition, and then tried the first extract, witnessed her condition deteriorate, and returned again to the second extract, which cured

[64] "J'ay crû devoir me servir de cette double extraction, l'une faire par l'esprit de vin, l'autre par l'eau, très persuade que la vertu de cette racine ne residoit pas dans sa resine seule, mais encore dans ses parties salines, sur lesquelles l'esprit de vin n'avoit pû mordre, et dont l'eau seulle est le propre dissolvant," Boulduc, "Analyse de l'ypecacuanha," 4.

[65] "M. Boulduc les a éprouvez sur différentes malades avec les precautions necessaires, et il en rapporte fidellement l'histoire," "Analise de L'ipecacuanha," *Histoire de l'Académie Royale Des Sciences. Année 1700*, 1703, 46–48.

[66] Archives de l'Académie des Sciences, Procès-verbaux, vol. 19 (January 9, 1700), fol. 4r-6r for the patient trials. These are, in the order of Bouduc's presentation: a 60 year old woman; three girls, aged 15, 10, and 5; an 80 year old man; a 70 year old woman; a 63 year old *abbé*; and a 25 year old woman.

her completely. In the case of three young girls, aged 5, 10, and 15, he was able to apply a more uniform method: he tried the first extract, which worked on the oldest girl, but failed to cure the youngest; he then tried the second extract, and found them all entirely cured.[67]

In his final article on ipecacuanha, Boulduc explicitly eschewed any definitive theoretical conclusions about the nature of the active virtues in ipecacuanha. Instead, he argued that the task of searching for principles was useful precisely because of the conjectural knowledge it produces, which is sufficient to guide the hand of practice:

> What I am so bold as to promise is that in performing the analysis and in searching for the virtues of this root—named Ipecacuanha, so vaunted for dysentery—I have found the means to make this otherwise fierce remedy into a gentle and manageable one, by blunting or rather removing the emetic force which accounts for all of tis violence.[68]

Without making a causal argument about principles and virtues, Boulduc argued that his analysis had led him to a method of preparing ipecacuanha which moderated its emetic effects, and in so doing bolstered its "specific" action against dysentery.

For Boulduc as for Helvétius, the problem with ipecacuanha was twofold: either its emetic action comes too quickly, physically hampering "the distribution" of the substance in the digestive tract; or, the violence of this emetic action—and the apprehension of it—forces the practitioner to diminish the dosage to the point where it would have little effect, hence also the bad reactions of patients "who tremble at the mere mention of ipecacuanha." On all of this, Boulduc observes that "I reflected on the problem and realized that, if one could slow or even wholly suppress its excessive power,

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[67] Ibid.

[68] "Ce que j'ose d'autant plus me prometre qu'en faisant l'Analyse et la recherche des vertus de cette racine tant vantée pour la dysentérie, nommé Ypecacuanha, j'ay trouvé le moyen de rendre doux et traitable ce medicament d'ailleurs si farouche, en emoussant ou plûtôt en supprimant la force émetique qui en fait toute la violence," Boulduc, "Observations sur les effets de l'ypecacuanha," 192.

by divesting it of its resinous parts, and leaving only the saline parts behind, then we could use it without apprehending any ill effects."[69] The double solvent extraction provided the means. The first (alcohol) extract of the root produced even more violent emetic effects, while the second (water) extract was free of the resinous part and contained only the "saline" part, which provokes urination and purges very moderately without nausea, "and finally, produces the specific effect of which this root is gifted, which is to cure dysentery, an effect I have observed not once, but several times, and always happily."[70]

Lacking an actual recipe from Helvétius prevents us from drawing any definitive conclusions about his preparation for the *remède spécifique*. Nonetheless, the evidence from Boulduc's analysis a decade later is suggestive of at least one possible way in which Helvétius may have achieved the basic material transformation of ipecacuanha from emetic to specific. From Helvétius' own statements, we can safely say that it was from reading Piso that he first learned of ipecacuanha, and the suggestion of an occult quality may have served to motivate him to obtain a supply. But the raw plant alone did not wholly constitute the medical secret of his drug: it was already available in Paris, and known even to prominent medical figures like Lémery.

It was also this preparation, or the "correction" to use Helvétius' own term, which he described having busied himself to achieve in the *Traité*, and which manifests the crucial information asymmetry between him and his ipecacuanha suppliers. They thought

[69] "Je fis réflexion et je crûs, que, si l'on pouvoit ralentir ou même supprimer entierement sa trop grande force, en le dépoüillant de ses parties resineuses, et ne luy laissant que ses parties salines, on pourroit s'en server sans an apprehender aucune mauvaise suite," Ibid., 193.

[70] "Le second au contraire dépoüillé de ses parties résineuses, et ne contenant que les parties salines, poussa par les urines considérablement, purgea modérément avec peu ou point de nausées, et produisit l'effet spécifique dont cette racine est doüé, qui est de guérir la dysenterie; c'est ce que je n'ay pas éprouvé une seule fois, mais plusieurs fois et toujours heureusement," Boulduc, "Observations sur les effets de l'ypecacuanha," 193.

they were selling him a dangerously violent emetic, and initially, were likely pleased to be rid of it; whereas Helvétius knew the emetic faculty could be corrected, and that the plant had another, "specific" virtue which was far more valuable.

*3. From court to camp: Helvétius as a military-medical entrepreneur*

The transformation of Helvétius' reputation and the transformation of ipecacuanha—from an emetic to a specific, in both intellectual and material terms—together provide the foundation for Helvétius' subsequent endeavours. Indeed, the reciprocal relation between Helvétius' reputation at court for curing dysentery and his continued supply of "corrected" ipecacuanha provided the direct foundation for the next transformation of his *remède spécifique*, namely, the move into military-medical contracting and bulk supplying.

We have already seen that the highest echelons of the French state, particularly the Marquis de Seignelay, were instrumental in securing the hospital trials that led to Helvétius' 1688 privilege. We have also seen that military applications, particularly in the navy, were underlined in Seignelay's own orders to the Parisian hospitals. Finally, we also know that by the time of the Parlement's sentence on the case between Helvétius and Garnier, on May 30, 1690, the Marquis de Louvois, France's War Secretary, had ordered Garnier not to sell ipeacacuanha to anyone but the army.

The Secretary of State for the Royal Household had been careful to include a proviso in Helvétius' 1688 letters patent which would exempt the navy and army from his monopoly and the fixed price of 3 *louis d'or* that had been placed on the drug.[71] The correspondence of the War Secretary shows that by October 1688, he was soliciting

[71] AN $O^1$ 32, 224r-225r, Permission au Sr Helvetius medecin de ebiter son remede pour les dissenteries (August 24, 1688); and *Lettres patentes du Roy portant pouvoir au Sieur Helvétius* (Paris: Jean-Baptiste Coignard, 1688).

prices and volumes from Helvétius for supplying it in bulk to the French army.[72] Despite these negotiations, there is no evidence that Helvétius supplied it until two years later: while the potential military applications of the *remède spécifique* had been part of the equation since day one, it was not until the drug was needed to combat a mounting epidemic of dysentery in the French garrisons of the Alsatian borderland in 1690 that Helvétius appears to have actually supplied it.

Evidence from French consular correspondence suggests that senior government ministers were making inquiries into securing a stable supply of ipecacuanha around the time Helvétius was granted his monopoly.[73] In 1687, the French consul in Cadiz, Pierre Catalan, was already closely involved in facilitating the shipment of large volumes of cinchona to French ports.[74] By November 24, 1687—just a week after Seignelay intervened in Helvétius' favour during his conflict with the Hôtel-Dieu staff— Louis Phélypeaux, Comte de Pontchartrain, then Intendant of Finances (later Controller-General) requested information on ipecacuanha and a samples from Catalan in Cadiz. The consul reported that the plant was vulgarly known as *bejuquillo* and sometimes *radix aury* in the Indies, because it grew in rocky areas near gold mines, one of which was 150 leagues from Cartagena (modern Colombia). It was used there against flux and fevers, following a preparation in which it was crushed in a mortar, passed through a tammy cloth, and then placed in a *terrine* and heated over a fire to reduce its force, after which it

[72] SHD A1 811, fol. 6, Louvois to Helvétius (October 18, 1688).

[73] Samir Boumediene, "L'acclimatation portuaire des savoirs sur le lointain : Les drogues exotiques à Séville, Cadix et Livourne (XVIe-XVIIe siècles)," in *Les savoirs-mondes : mobilités et circulation des savoirs depuis le Moyen Age*, ed. Liliane Hilaire-Peréz and Pilar González Bernaldo (Rennes: Presses Universitaires de Rennes, 2015), 141–143. I am indebted to Samir Boumediene for the suggestion of looking at the French consulary corresponcence from Cadiz.

[74] Catalan's letters indicates that, following an order from Pontchartrain, he supplied over 610 pounds of good quality cinchona for France, shipped via Le Havre: AN AE $B^1$ 213, Catalan to Pontchartrain, fol. 85r (December 8, 1687), and fol. 86v (December 22, 1687).

was taken with lukewarm water followed by wine. Interestingly, Catalan reported that the goal of this preparation was in fact to provoke vomiting: "They [his informants] say that the cure is certain once the *bejuquillo* provokes vomiting."[75] Helvétius, by contrast, worked explicitly against the emetic property, identifying it as detrimental to the plant's specific action against dysentery.

Catalan was able to find a small supply (*une petite caisse*) and sent it to Le Havre along with a sample of cinchona and a Latin *mémoire* from a "famous physician," which seems not to have survived.[76] Securing a larger supply for France proved to be far more difficult, as a letter from March 1688 reveals:

> I am taking measures to bring 300 pounds of *Bejuquillo* or *radix aury* from Peru. This root is not so abundant here as you believe, I have been assured that the galleons only bring back between 50 and 100 pounds on each voyage. Nonetheless I will write you at the first opportunity and will do my best to collect, if at all possible, the 300 pounds, or at least as much as can be found.[77]

Following Catalan's assessment of how much each galleon fleet carried, the annual supply of ipecacuanha to Cadiz—and likely to Europe as a whole—may have been very small indeed. The difficulties of securing a supply in France would only get worse when Spain entered the War of the League of Augsburg against France, as we have already seen from the judgement of the Paris Parlement, which rescinded the remainder of

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[75] "L'on dit que la guérison du flux de sang est sure quand le bejuquillo a fait vomir," AN AE $B^1$ 213. Catalan to Pontchartrain (November 24, 1687), fol. 82v-82r.

[76] AN AE $B^1$ 213. Catalan to Pontchartrain (December 8, 1687), fol. 85v: "J'ay fait une exacte recherche de la racine Beguquillo, elle est extrêmement rare, pourtant j'en ay trouvé heureusement une livre, assuré véritable, je vous l'envoiré Monseigneur par le premier navire avec une recepte du plus fameux médecin d'icy de l'usage qu'on en fait." This was sent on December 22, along with 610 poudns of cinchona to Le Havre: see fol. 87r (December 22, 1687), which also mentions the Latin *mémoire* from the "famous physician."

[77] "Je prene mes mesures pour faire venir du Perou 300 livres de Bejuquillo ou radix aury. Cette racine n'est pas sy abondante que vous croyés puis que on m'a assuré que les galions n'en apportent pas chaque voyage plus de 50 à 100 livres. Cependant j'escriray par la première occasion et feray en sorte qu'on ramasse, s'il est possible, les 300 livres ou du moins tout ce qui s'y trouvera," AN AE $B^1$ 213, Catalan to Pontchartrain (March 15, 1688), fol. 106r-v

Garnier's ipecacuanha contract with Helvétius in 1688, and also reports that Louvois had instructed Garnier not to sell the root to anyone but the French army.

Scarcely a month after Helvétius was granted his fifteen-year privilege, France found itself at war with most of Europe. Like so many others, this war was intended to be short and swift: Louis XIV invaded the Rhineland on September 25, 1688, with the primary goal of securing a more defensible frontier in Alsace, the most strategically vulnerable of France's provinces. France made swift gains, but a growing contingent of other European powers began to rally their forces to prevent further French expansion. As the French realized their planned short war was becoming a long, protracted conflict, the French army hunkered down in its fortresses along the Rhine, and the highest levels of the French military, including Louvois himself, began advocating a deliberate policy of destruction to prevent any army from approaching the border. The results of this plan are now known as the 1689 Ravage of the Palatinate, during which an extensive belt along the Rhine, including fortifications as well as villages and farms, were razed to secure the French defensive position.[78] Despite these measures, in the year following the Ravage of the Palatinate, the French army along the Rhine found itself besieged by two very different enemies: namely, dysentery on the one hand, and on the other an ad hoc medical supply system which the senior bureaucrats of the War Office saw as inherently corrupt and ineffective.

Historians over the past two decades have pointed out that France, like most early modern states, had not yet nationalized many functions which supported the waging of

[78] John A. Lynn, "A Brutal Necessity? The Devastation of the Palatinate, 1688-1689," in *Civilians in the Path of War*, ed. Clifford J Rogers and Mark Grimsley (Lincoln: University of Nebraska Press, 2002), 79–111; Jean-Philippe Cénat, "Le ravage du Palatinat : politique de destruction, stratégie de cabinet et propagande au début de la guerre de la Ligue d'Augsbourg," *Revue historique* 633 (2005): 97–132.

war, and instead relied on ad hoc contracting with private entrepreneurs to meet various fiscal, organizational, and supply needs. Tax collection was farmed out to raise revenue; entrepreneurs provided military manpower, transportation, fortifications, and ammunition; and mercenaries continued to form an important contingent in early modern armies.[79] Health care, particularly the supply and daily needs of army hospitals, were also met through private contracting, but in comparison with these other kinds of supply and service, medical entrepreneurs have as of yet received little scholarly attention, especially in France.[80]

From the 1660s onwards, French army hospitals were dependent upon entrepreneurs who received contracts on an annual basis and were supposed to be closely monitored by *commissaires des guerres*. These functionaries were charged with regimental management, the review of troops, logistics, and regularly reporting on all of these matters to the Secretary of State for War.[81] This system presented numerous practical problems for the *commissaires*, who always had to be on the lookout for corruption and fraud on the part of hospital entrepreneurs (usually called "malversations"

[79] For an excellent survey of this literature, see Jeff Fynn-Paul, Marjolein 't Hart, and Griet Vermeesch, "Entrepreneurs, Military Supply, and State Formation in the Late Medieval and Early Modern Periods: New Directions," in *War, Entrepreneurs, and the State in Europe and the Mediterranean, 1300-1800*, ed. Jeff Fynn-Paul (Leiden: Brill, 2014), 1–12.

[80] There has been no comprehensive study of the role of army hospital entrepreneurs under Louis XIV: for brief surveys, see Monique Lucenet, *Médecine, chirurgie et armée en France au siècle des lumières* (Clichy-la-Garenne: Édition I&D, 2006), 36–51; Guy Rowlands, *The Dynastic State and the Army under Louis XIV: Royal Service and Private Interest, 1661-1701* (Cambridge: Cambridge University Press, 2002), 97–98; John A. Lynn, *Giant of the Grand Siècle: The French Army, 1610-1715* (Cambridge: Cambridge University Press, 1997), 420–426; Léon Mention, *L'Armée de l'ancien régime, de Louis XIV à la Révolution* (Paris: Société française d'étidions de l'art, 1909), 274–278; Louis André, *Michel le Tellier et l'organisation de l'armée monarchique* (Paris: Félix Alcan, 1906), 475–487. The English navy in this period has been better served: on the origins of private contractor hospitals, see Matthew Neufeld and Blaine Wickham, "The State, the People and the Care of Sick and Injured Sailors in Late Stuart England," *Social History of Medicine* 28, no. 1 (2015): 45–63.

[81] Rowlands, *The Dynastic State and the Army*, 97–98; Lynn, *Giant of the Grand Siècle*, 88–92.

and "fripponnerie").[82] Although the daily activities of the hospital entrepreneurs generated the most voluminous records, the *commissaires des guerres* also negotiated with smaller military-medical suppliers, most notably apothecaries, who supplied medications and dispensed them to hospitalized soldiers.

Some *commissaires des guerres* took an active interest in rendering the care of sick and wounded more efficient. Writing to Louvois, Denis Baudouin, the *commissaire de guerre* stationed at Landau, "took great care to enter into the details of the hospital" and was preparing a *règlement* intended to make the Landau hospital more efficient and serve as a model for others. He pointed to a number of problems: the ditches taking the runoff from hospital latrines needed to be properly engineered and kept from plugging up, lest they "infect" the hospitals; the courtyards of the hospitals should be paved; convalescent homes should be established in nearby villages to clear hospital beds and remove soldiers that were recovering from those that were still sick. By far the longest portion of the letter, however, dealt closely with the problem of supplying medicines to hospital patients:

> We have contracted an apothecary to furnish the necessary remedies at six *deniers* per day per patient. I have observed that this variety of entrepreneur-apothecaries are all miserable sorts who do not have the means to make any provision, and if they have any, it's always the scraps from the boutiques, and they dispense as few medicines as they can, and always in the wrong dosages.[83]

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[82] Lucenet, *Médecine, chirurgie et armée en France*, 36–51. The most of important form of fraud on the part of the entrepreneurs was charging the standard daily patient care rate for patients who were, in fact, not in the hospital, a practice which could only be controlled through diligent record keeping and auditing, comparing the hospital registers with those of the *commissaires des guerres* and almoners, and heavy fines for fraud. Other forms of cost-cutting, skimping, and even theft on the part of entrepreneurs were also common, notably the provision of substandard food or dirty linens, but perhaps the most notable cases on the Alsatian border in the 1690s surrounded the arms, equipment, and uniforms of soldiers who died in hospital being confiscated by the entrepreneurs who hoped to re-sold back to the regiment. See for example SHD A1 1000, fols. 283, 301.

[83] "L'on a traité à six deniers par journée de malades avec un apotiquaire pour fournir les remedes necessaires; j'ay observé que ces sotes d'apotiquaires entrepreneurs sont des miserables qui n'ont pas le

Baudouin proposed an alternative method which would ensure the quantity, quality, and correct dosage of the remedies used in the hospitals and would allow for greater accountability from the apothecaries:

> For a large hospital in an advanced position, where armies often send more wounded than can be received, it would be better to buy a good supply of remedies at His Majesty's expense, which could then be put in the hands of an apothecary who would be paid to compound and distribute them. The sick would be better treated and there would be no danger of shortfalls: the only abuse to fear would be that the apothecary would sell them. But we could prevent this by obliging all of the physicians to specify in French instead of Latin the dosage of the remedies in their prescriptions, which will be entered in the apothecary's registers; and it would suffice to hold said apothecary to account each week for the consumption of said remedies. It seems to me that this would cost His Majesty nothing extra.[84]

By March, just a few months later, it seems that Baudouin's suggestions were being implemented. The first drug to be supplied in this way was cinchona: Louvois informed the *commissaires* that the crown had purchased a large quantity of cinchona, which was to be requested as needed by each hospital from a central supply under the control of the War Office.[85] By May, Louvois was interested in testing another drug for similar use: he sent six chests (*boëtes*) of "remède pour la dissenterie" with an attached "mémoire pour en servir" to Baudoin at Landau and to his counterpart at Philipsburg, the *commissaire*

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moyen de faire aucune provision, ou s'ils en ont, c'est peu et toujours le rebut des boutiques, donnant le moins qu'ils peuvent de remedes, et toujours mal dozés," SHD A1 966, fol. 188, Baudouin to Louvois (January 11, 1690).

[84] "Il servit mieux pour un grand hopital dans une place de guerre avancé ou les armées apportent souvent plus de malades qu'on ne peut recevoir, d'achepter aux despens de Sa Majesté une bonne provision de remedes pour estre ensuite remise entre les mains d'un apotiquaire qui seroit payé pour les composer et distribuer; les malades ne seroient mieux soulagés, on ne seroit pas en danger d'en manquer, il n'y auroit qu'un abus à craindre qui seroit que l'apotiquaire n'en vendra. Mais on pourra le prevenir en obligant les medecins de bien specifier en francois et non [en Latin] la doze des remedes dans leurs ordonnances qui seroient mise sur le registre de l'apotiquaire, et su—aire compter ledit apotiquaire toutes les semaines de la consommation desdits remedes; il me parait qu'il n'en couteroit pas plus à Sa Majesté," Ibid.

[85] SHD A1 915, fol. 163, 166 (form letter), Louvois to Baudouin in Landau and Fontemorte in Philipsburg (March 24, 1690).

Fontemorte.[86] By July 1, Baudouin was reporting back on the efficacy of the drug: soldiers whose dysentery was just beginning were promptly cured by the drug, while he estimated that the drug was not at all effective in cases of "old dysenteries," which accounted for most of the casualties at the Landau hospital.[87] Fontemorte provided a similarly positive review, noted the drug's inefficacy on old cases, and requested more of the drug, having already used up the initial supply:

> The remedy it pleased you to send us for dysentery has turned out to be so good that we have consumed almost all of it. I humbly beseech you Monseigneur to order more of it to be sent here, because we have hardly any other diseases. We have observed that the remedy must be used at the beginning [of the disease], and that it has no effect once the sickness sets in.[88]

The situation began to worsen in the following weeks. De la Grange, the Strasbourg intendant, inspected the fortifications and hospital at Landau on August 5, and observed that although the hospital was clean and well maintained, there were over 1,600 patients there, and no more could be added. "Many have the bloody flux, if the remedy you send M. Baudouin *commissaire* succeeds, it will need to be sent to the other hospitals."[89] The prose reports and tabulated *états* of admissions, discharges, and deaths at the Alsatian hospitals are not broken down by disease, but all reported that dysentery was the main cause: on August 14, De la Grange observed "Most of the sick at the hospitals of Landau

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[86] SHD A1 918, fol. 320bis, Louvois to Baudouin and Fontmorte (May 13, 1690)

[87] SHD A1 991, fol. 83, Baudouin to Louvois (July 1, 1690).

[88] "Le remède qu'il vous a plu d'envoyer icy pour la dissenterie se trouve si bon, qu'il est presque tout consommé, je vous supplie très humblement Monseigneur de vouloir bien ordonner que l'on nous en envoye encore, puisque nous avons presque pas d'autre maladies. On a observé qu'il faut servir dudit remède dans le commencement, et qu'il est sans aucun effet, lorsque le mal est entrée," SHD A1 991, fol. 111, Fontemorte to Louvois (July 19, 1690).

[89] "Il y en a beaucoup qui ont le flux de sang, si le remède que vous avez envoyé a M Baudoin commissaire réussi, il en faudra pour tout les autres hospitaux," SHD A1 1000, fol. 162, De la Grange to Louvois (August 5, 1690).

and Haguenau are sick from bowel runs and bloody flux. There are also many cases at Strasbourg."

By the middle of August, it appears that all of the hospitals of Alsace were dealing with a full-blown epidemic of dysentery.[90] Aware of the gravity of the situation, Louvois ordered De la Grange to collect data from all seven hospitals and report back to him with a full *état*, which the latter did on September 2. De la Grange estimated that over 5,000 soldiers were presently in hospitals, and confessed that the record keeping methods and time-spans used by the *commissaires* at each site differed, a problem which he promised would not occur again in the future. But as far as he was able to determine, in the past two months, 9,030 soldiers had been admitted to the hospitals, 4,402 had been discharged, and 1,054 had died. Of these deaths, nearly half, 428, had occurred at Landau, where the epidemic was most deadly, all within the month of August. The Landau figures also show the relatively small part that wounds played among hospitalized soldiers: of the 947 patients in the hospital on the day the survey was taken, only 94 suffered from wounds. Deaths from the epidemic peaked at the end of August but continued into September: at Landau, Baudouin reported that in the first two weeks of that month, 182 were admitted, 117 convalescents were discharged, and 141 died. After visiting the Landau hospital, Fontemorte reported that there was such a stench in the hospital that he could hardly stand it: "it comes from the mattresses, on which the dysenterics are laid two by two, making it impossible to change them."[91] Despite this grim portrait, the situation in fact improved markedly in the month of October: at the end

[90] The intendant De la Grange reported, "La plus part es malades qui son tans les hospitaux de Landau et d'Haguenau le sont de cours de ventre, et de flux de sang. Il y en a aussy beaucoup à Strasbourg," SHD A1 1000 fol. 174, De la Grange to Louvois (August 14, 1690).

[91] "Elle provient des matelas sur lesquels les dissenteriques sont couches deux à deux, comme il n'est pas possible des les changer," SHD A1 991, fol. 211, Fontemorte to Louvois (October 3, 1691).

of the month, Baudouin reported that the rates of dysentery had declined, and the remaining casualties were due primarily to intermittent fevers.[92]

As the epidemic abated, the shipments of dysentery remedy entered an explicitly experimental phase, possibly due to a lack of the earlier permutation of the drug. Baudouin's correspondence, as well as Fontemorte's, suggests that the *Bureau de guerre* began sending them different varieties of the remedy, and that the two *commissaires* reported back on the effects of these variants: Baudouin's September 14 report, for instance, suggests that he had been sent three distinct varieties of the drug: a black powder, a white powder, and a third compounded remedy "wrapped in paper." Based on Baudouin's observations, only the last variety—the packaging of which matches that used by Helvétius—was effective, although he had been sent a much larger quantity of the other, ineffective powders.[93] A large shipment of this variant was sent to De la Grange in October, along with a letter explaining how to administer it which was copied and forwarded with the shipments to Strasbourg, Sélestat, and Brisach, with instructions to report back on its effects.[94] This letter has not survived, but an addendum from Louvois does:

> Concerning the dysentery remedy which I sent to you, I would add to what I have already written that the man who gave it to me told me that all the

[92] SHD A1 991, fol. 303, Baudouin to Louvois (December 7, 1690). Baudouin reported that at Landau in the month of October, 383 were admitted to the hospital, 509 convalescents were discharged, 78 died, and 416 remained in the hospital.

[93] "Le dernier remede que vous en avez envoyé Monseigneur pour la dissenterie en a gueri entierement un soldat auquel on a fai prendre trois fois de ce remede; Je vous suply de en envoyer encore, ayant epuisé ce que vous m'en avés envoyé. Je observerai Monseigneur que ce n'est pas de la poudre noire ny blanche dont vous en avés envoyé plus de boëtes; mais c'est le remede qui est envelopé dans du papier et qui est comme du papier brulé (?)," SHD A1 991, fol. 193, Baudouin to Louvois (September 14, 1690).

[94] SHD A1 1000, fol. 258, De la Grange to Louvois (October 10, 1690). "J'ai receu les lettres que vous m'avez fait l'honneur de m'escrire les 23 25 27 du mois passé, et premier de celuy-cy, avec les deux boettes de poudres que vous m'avez adressés pour guérir la disanterie, je les ay fait distribuer dans les hospitaux de Strasbourg, Schelstat, et Brisack, et j'ay envoyé a Mrs. les commissaires la copie de la lettre qui contient la manière de s'en servir, afin qu'après avoir observé l'effet de ce remède, ils m'en envoye un mémoire pour que je puisse vous en rendre compte."

> powders must be put into a mortar with a bit of white wine to dissolve them, and after this they should be infused, following the earlier instructions. In cases where the patient is not cured in the first three days that he takes the remedy, continue to give it to him for another three, which adds up to six days in sequence, being careful to ensure that he unclenches his teeth, otherwise he will only swallow the wine, and the powders will remain in his mouth, and he will spit them out, which will prevent the remedy from having its effect.[95]

Evidence that such a report was made survived from the correspondence of at least one *commissaire*, Fontemorte, who reported that the "remedy for dysentery, which is half black powder, half grey" was not at all effective at Philipsburg. He enclosed the report of the hospitals' physician with his letter, but this has unfortunately not survived.[96] There is evidence that another shipment of "une poudre pour la dissenterie" was made on November 5, but because the page containing the letter which accompanied it is missing from the dispatch register, it is impossible to tell which variant was sent.[97]

From these hints, we can suppose that Helvétius was experimenting with different versions of the drug, perhaps due to the difficulty of supplying his original 1688 version in such large quantities. The descriptions of two distinct powders to be mixed together on-site may refer to brown and grey (or even white) ipecacuanha: Helvétius may have

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[95] "J'adjousteray à ce que je vous ay escrit sur le remede que je vous ay envoyé pour guérir de la dissenterie, que celuy qui me l'a donné m'a dit qu'il falloit mettre toutes les poudres dans un mortier avec un peu de vin blanc pour les bien dissoudre, et après les faire infuser, suivant que je vous l'ay marqué, qu'en cas que le malade ne guérisse pas, pendant les trois jours qu'il prendre ce remede, il faudra continuer a luy en donner encore trois autres jours, qui sera six jours de suite, observant de luy bien faire desserrer les dents, parce qu'il n'avalleroit que le vin, et les poudres restant dans sa bouche, les cracheroit ce qui empescheroit le remede de faire son effect, il faut aussy que le malade boive fort peu, et que ce ne soit que de la tisanne," SHD A1 999, fol. 240, Louvois to De la Grange (October 17, 1690).

[96] "Je joinds icy les observations et le raisonnement du médecin de l'hospital sur l'épreuve qu'il a fait du remede pour la dissenterie, qui est moytié poudre noire, et moytié poudre grise, lequel il n'approuve point du tout, il en desduit les raisons, et je scay qu'il n'a produit aucun bon effect, le flux de sang qu'il arreste dès le deuxième ou troisième jour revenant plus grand qu'il ne l'avoit esté," SHD A1 999, fol. 249, Fontmorte to Louvois (November 5, 1690).

[97] The table for SHD A1 999, lists the following item "5 novembre. Le même [Louvois] envoye une poudre pour la dissenterie," but these pages of the volume have been cut out of the binding (four stubs remain). The conservator, Bertrand Fonck, suggests these pages were cut out illicitly by an autograph vendor or some other interested party.

tried to compensate for a shortfall in his supply of brown ipecacuanha by mixing it with the grey or white varieties. Likewise, Louvois' letter suggests that the version sent in October was intended to be compounded locally: this may be due to difficulties in keeping the ready-compounded powder dry during transport from Paris to Alsace. Baudouin's letter is telling in this regard: he condemns the "black" and "white" varieties, which he had been sent the largest volumes of, preferring instead the remedy that was "wrapped in paper," which likely corresponds to Helvétius' original packaged drug. Finally, a third possibility should be acknowledged, namely that some of these shipments may not have come from Helvétius at all: they could have come from a competitor, or may be the result of the army itself attempting to buy raw ipecacuanha in bulk and have it compounded on-site by the entrepreneur-apothecaries, following a recipe which Helvétius or another physician had provided.

Whatever the case, it seems clear that this first experience of military supplying triggered a critical shift in Helvétius' career. He went from producing a drug destined for the consumption of small numbers of élites, to one which was targeted at military populations in campaign hospital settings at a considerable distance from Paris. How widely was it applied in other military settings in the coming decades? Although more research is needed to fully flesh out how many campaigns made use of it, we know that it was widely used in Savoy and the Piedmont during the War of the Spanish Succession (1701-1714), and Helvétius includes a reference letter from Louis Joseph, Duke of Vendôme, Marshal of France, France's highest general, which testified to its successful use in that conflict, as well as those of individual hospital physicians from Oulx,

Briançon, and Fenestrelle.[98] Beyond this long-term medical supply relationship, Helvétius would even go on to become official inspector of military hospitals in Flanders from 1707 onward.

Helvétius was not wholly unique in this period as a medical entrepreneur turned military contractor. We have already seen that the Louvre Capuchins supplied their proprietary remedies to the court at Versailles as well as the French army in 1679.[99] In the early eighteenth century, Helvétius' example was followed by other vendors of proprietary remedies who marketed their drugs to the French military: these include Antoine du Muth de la Motte, who received a royal privilege for his golden elixir and allowed it to be produced following his recipe for the disabled soldiers of the Hôtel des Invalides;[100] and that of Ferdinand de Guiller's *poudre fébrifuge*, which serves as the basis of the next chapter. Indeed, senior officials like Pontchartrain as well as local intendants were constantly on the lookout for potentially useful medical secrets that could help solve military health problems.[101]

Finally, although the military-contracting experiences of Helvétius and these later vendors went reasonably well, at least one contemporary case, that of Pierre-Jean Le Mère (c. 1652-1726), known as "Le Médecin soldat," shows that in addition to being lucrative, supplying the military with medicines could also be quite dangerous. Le Mère had served as a surgeon in the French army, and learned the secret of a febrifuge from a Turk while travelling in the east. He used it to cure Sébastien Le Prestre, Marquis de

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[98] AN G$^7$ 716, "Placet à Monseigneur Desmaretz," fols. 14r-15v: reference letters from Michelet, physician of the Oulx hospital (October 11, 1707); fol. 14v Trava, of the Briançon hospital (no date); fol. 15r from Cassarel, Fenestrelle hospital (October 6, 1707); and fol. 15v, from Vendôme (March 14, 1706).

[99] See above, ch. 2, sect. 1.

[100] Maurice Bouvet, "La spécialité pharmaceutique au XVIIIe siècle : Les gouttes du général de la Motte," *Revue moderne de pharmacie* 12, no. 1 (1922): 7–15.

[101] See below, ch. 5, sect. 1.

Vauban, who had been abandoned by the Paris Faculty doctors. As a reward, Le Mère was made naval physician to the port of Brest and proposed to test his drugs there and then to supply them to the navy. In 1691, however, he claims that he was asked to vacate his position by Louvois, who intended to give it to someone else, and offered to pay him a minor pension for his trouble. When he refused Louvois' repeated offers, he promptly found himself arrested under *lettre de cachet* under a series of charges, most notably that of conspiring to poison the sailors of the navy with medicines containing corrosive sublimate and arsenic. He spent the next thirty years of his life in the dungeons of Vincennes and the Bastille, being finally released in 1726 at the age of 74 following the repeated petitions of his relatives.[102]

As a medical contractor, Helvétius also had close analogues across the channel in England. These include John Colbatch (d. 1729), whose connections to army officers enabled him to try his proprietary Vulnerary Powder and Tincture of the Sulphur of Venus, intended, respectively, to stop bleeding and help heal wounds, on English soldiers.[103] In the English navy, William Cockburn (1669-1739) provides a similar case. His success, like that of Helvétius, was based on a dysentery cure applied to military populations: after testing his electuary against dysentery shipboard in 1696, he went on to supply it to the navy for forty years.[104] Citing these two examples in particular, Harold J. Cook has suggested that after the so-called Glorious Revolution, "the new military establishment reinforced the growing cachet of empirical, practical, 'clinical' medicine,

[102] I encountered Le Mère's case in the rich prisoner records of the Bastille at the Bibliothèque de l'Arsenal, ms. 10493. The only historical account of his tragic life is that of Roger Goulard, "Les aventures de Pierre-Jean Le Mère « Médecin soldat » au XVIIe siècle," *Bulletin de la Société française de l'histoire de la médecine* 14, no. 7–8 (1920). I plan to revisit this case in a later publication.

[103] Harold J. Cook, "Sir John Colbatch and Augustan Medicine: Experimentalism, Character and Entrepreneurialism," *Annals of Science* 47, no. 5 (1990): 475–505.

[104] Charles Creighton and Anita Guerrini, "Cockburn, William (1669–1739)," *Oxford Dictionary of National Biography*, 2008, http://www.oxforddnb.com/view/article/5777.

undermining the ideas of medical judgement held dear by the learned physicians," and that it was "oriented to a mass clientele, based upon the power of practitioner over patient, directed toward quick and simple cures, and rooted in a belief in specific disease entities rather than unique physiological imbalances."[105] This description fits Helvétius' case as well, but despite these analogues in France and England, there is at least one aspect of his career which appears to be singular: Helvétius' adaptation of his drug to a "mass clientele" was taken one step further. He began supplying his drugs not just to soldiers, but to peasants as well, as part of a royally-funded program of medical charity.

Although Helvétius' 1690 experiments no doubt played a role in re-shaping the medical compound of the *remède spécifique* into a population-scale drug which could be delivered to populations beyond the army, this new application had to be accompanied by a critical transformation in the instructions which accompanied his medicines. In the military case, Helvétius could transmit his instructions to the War Office, which could send them down to the intendants and *commissaries des guerres*, where he could rely on the existing medical infrastructure of the army hospitals. Supplying his drugs to the rural poor of the French provinces, where they would be dispensed and administered by a far more irregular set of actors with variable literacy skills and medical training—from local barber-surgeons, to parish priests, and Daughters of Charity—required a revolution in printed medical instructions, to which we will now turn.

*4. The de-individualization of administration instructions*

Although Helvétius nowhere provides an account of how his therapeutic views evolved over time, evidence of how he adapted the drug for delivery en-masse to

[105] Harold J. Cook, "Practical Medicine and the British Armed Forces after the 'Glorious Revolution,'" *Medical History* 34, no. 1 (1990): 2, 3.

populations can be found by tracking the evolution of the printed instructions he provided on how to take the drug. This section looks at the initial 1688 *Méthode* that accompanied the first version of the drug, and compares its instructions to his 1703 *Traité de maladies* and to the single-sheet "Mémoires instructifs" which accompanied his chests to the provinces.

Helvétius's 1688 *Methode* projected a complex, two-month treatment based on a battery of different labelled packets of powder taken in conjunction with a precise regimen of food and drink, with numerous contingency instructions for special cases and complications. In the morning and evening of days 1-3 of the treatment, the patient must take the powder of a packet labelled A, mix it in half a glass of wine, and then take some soup two hours later; the contents of this packet are intended to soften corrosive humours that are excoriating the patient's intestines. The patient then continues to take A-packets in the same way on all "unmarked" days; the marked days, spread across the following two months, each provide special instructions. On days 4, 9, 13 and 15, for instance, the patient takes one of the doses marked B, B2, B3, and B4, diluted in half a glass of wine: these, Helvetius writes, are meant to expel the viscous and silty bile from the stomach which is preventing food from being digested and souring their chyle, leading to the disastrous complications that often accompany the flux and dysentery. On day 7, and afterward on every fifteenth day of the treatment, they must purge using the medicine marked C with an infusion for which he provides a recipe. Patients are to follow this regimen carefully, even after they feel they have recovered, lest they relapse. This regimen is to be modified in special conditions, based primarily on age and temperament,

as well as pregnancy.[106] Helvétius also acknowledges the emetic properties which continued to persist in the remedy despite his preparation, but stresses the need to avoid vomiting as much as possible when taking them. In the later pages of the *Methode* he provides further advice on regimen and recipes for an infusion, and enema, and an oil to respond to certain complications that accompany dysentery (notably hemorrhoids), and in the former cases even offers a simplified recipe to be used in places where the preferred ingredients are not available.[107]

Helvétius concludes his *Methode* with a few pages of apologetics, aimed primarily at fellow physicians who might be sceptical of so-called specifics like his. He confesses that he himself was surprised at the common effectiveness of his remedy in patients with radically different temperaments, but counsels any who doubt it to try it, and is confident that they will be forced to acknowledge its effectiveness. He notes that he will charge no special fee for those who come to him early for his medicine, but that he will charge extraordinary fees to those who wait too long to call on him. The poor, however, will always be treated gratis, not only for dysentery but for fevers, dropsy, and the falling sickness. Finally, he warns the reader to suffer no imitations: the king is the only one who knows his secret, and that all others are counterfeiters whose remedies will not produce the effects they promise. On the back cover, he even includes the text of a certificate from Daquin approving his remedy.[108]

By 1690, however, the secret was out (probably thanks to his trial with Garnier) and all of Helvétius' subsequent instructions accompanying the medicine chests sent out to the provinces and all of his other publications refer to ipecacuanha as the key

[106] I hope to explore these and other details in an article focusing on Helvétius' instruction sheets.
[107] *Methode de Mr. Helvétius*, 1-17.
[108] *Methode de Mr. Helvétius*,17-20.

ingredient of his "Poudre Spécifique contre la Dysenterie." Indeed, the treatment regimen is also vastly simplified in the 1703 *Traité des maladies les plus fréquentes* as well as the mass-audience instructions derived from it that later accompanied his medicine crates to the army and the provinces. Gone is the two month regimen and all mention of packets labeled A, B, or C. Instead, we find only single packets of powdered root of ipecacuanha being diluted in wine or broth, which the patient is counseled to take early in the morning. If the patient still experiences pains and evacuations the next day, he or she should take another dose; if not, then he or she can wait a day or two before taking a second dose. A third and even fourth dose are recommended if the dysentery persists, and in the days in between, the patient should take another of his drugs, the "Poudre corrective," to fortify the stomach and aid digestion, but again only if the dysentery is persistent. If it goes into remission he or she should take a dose of yet another drug, the tincture of coral (later called anodyne coral). After these instructions, Helvétius provides special instructions for cases where dysentery is accompanied by fever and a short recovery regime. He even counsels patients to write to him and describe their condition if his remedy fails, and promises to write back. Indeed, beyond mixing the powder with wine or broth, the only counsel that carries over from the earlier *Methode* is the exhortation for the patient to avoid vomiting as much as possible and the special instructions for age, temperament, and pregnancy.[109]

The pamphlets that Helvétius would enclose with his medicine crates are even more concise. In them, he distinguishes two different uses of ipecacuanha: the first is to provoke vomiting; the second, specific to dysentery, is to melt and divide thick humours trapped in the intestines. This requires much lower doses than if it is being used as an

[109] Helvétius, *Traité des maladies les plus fréquentes* 266-270.

emetic (each dose contains only about a half grain of ipecacuanha). Here the ipecacuanha is mixed with anodyne coral in a base of flatbread (*pain à chanter*) to form a pill, swallowed with a small glass of wine or bouillon. A dosage scheme based on age follows: one pill for children 2-6, two for 6-12, three for 12-24, and especially robust patients can take four to six pills at once. In this case, the ipecac must be kept there for as long as possible and so vomiting must be avoided: "We must always exhort the patient to resist vomiting for as long as possible, so that the remedy will stay in the stomach for as long as possible."[110] To this end, Helvétius recommends having the patient drink warm water after swallowing the drug.

How can we explain this transformation? To begin, the initial 1688 instructions still make use of the basic concepts of learned medicine: allowances for different constitutions, regimens, and control over the non-naturals. They have admittedly made an important departure from individualized therapy by prescribing a basic, uniform treatment regime for the majority of patients, but at several points they read more like an attempt to simulate learned medical judgement by anticipating certain types of complications, and providing solutions to them. Most fundamentally, however, the 1688 instructions presuppose a high degree of control over the patient's non-naturals for a protracted period of time. In this way, they still bear the hallmarks of the conditions in which Helvétius had been practicing up until then, namely the treatment of bourgeois and aristocratic patients. The 1703 instructions presuppose just the opposite. In the dedicatory epistle to the collected version of the 1703 instructions, Helvétius observes that the past few years had afforded him experience in devising remedies for patients who were

[110] "Usage de L'Hypecacuanha Préparé, appellé Poudre Spécifique contre la Dysenterie," 2.

precluded from more "ordinary relief" by the "tumult of warfare."[111] He even observes that he personally still uses "ordinary" forms of medicine when possible, such as bloodletting and enemas, because these can sometimes halt disease at its origin by regulating a patient's non-naturals. But in cases where it becomes entrenched and obstinate, specific remedies are the only true recourse.[112]

Perhaps the most important question about this transformation is whether it marks an overall simplification of the treatment regime or simply a distinction of two different approaches to administering the *poudre spécifique*: would aristocratic patients, for instance, still be receiving a treatment that looked more like the 1688 one, while soldiers, sailors, and the rural poor were given the "rough and ready" treatment of the 1705 instructions? The question is difficult to answer, but I should note that there are no reprints of the more extensive instructions, nor are their points taken up again in the editions of the *Traité des maladies* from 1703 onward. In cases where Helvétius was personally managing a treatment, the "rough and ready" instructions would almost certainly have been modified. Other physicians who used his drugs likely personalized their treatment as well. But for a practitioner who was serious about treating entire populations, the 1688 instructions were a dead end: they could not really replace the judgement of a physician, and given the unlikelihood of being able to control regimen and administer ancillary therapies in the context of dispensation in military hospitals and among the rural poor, the better option was to dispense with individualizing elements entirely.

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[111] Adrien Helvétius, *Mémoires instructifs sur l'usage des différents remèdes spécifiques pour les armées du Roy et les malades de la campagne* (Paris: Pierre Le Mercier, 1705), $a_{iiij}$ r.

[112] Ibid., [B2] r.

The transition from complex, particularized instructions, to simple, generalizable instructions marks the culmination of a series of transformations that began with the pharmacological re-conceptualization of ipecacuanha from an emetic to a medicinal specific, and Helvétius' efforts to devise a "corrective" preparation of the root itself.

*5. Distribution, charity, and the fiscal state*

In September of 1709 Helvétius submitted an extensive proposal to the new Controller-General of Finances, Nicholas Desmaretz (1648-1721). He proposed the creation of a new office, that of Distributor General of Remedies for the Relief of the Poor (*Distributeur général des Remèdes pour le soulagement des pauvres*), which he was prepared to purchase, as well as a host of cost-saving reforms to the existing practices of distributing his remedies annually to the rural poor of the French provinces. The main goal of these reforms and the attendant office was to save "an infinite number of persons in the parishes of the countryside," who are annually killed by "contagious diseases" (*maladies contagiueses*) for lack of any help or remedies.[113]

Helvétius' proposal was one of hundreds that were submitted to the office of the Controller-General, who actively solicited propositions for reform from both inside or outside of the government. Most projects sought either to respond to abuses in the existing financial system or proposed methods for securing new sources of revenue for

[113] AN $G^7$ 716, Propositions et projets de réformes adressés au contrôleur général par des officiers royaux ou des particuliers, Ocotber-December 1709, "Le Sieur Helvétius, Proposition de création d'un office de Distributeur général des remèdes." This box includes a *placet*, three separate *mémoires*, and three letters from Helvétius, two of which are dated: 2 and 29 September 1709. The opening words of one of the *mémoires* neatly summarizes the basic goal of improving the distribution of remedies: "Une funeste expérience apprend que les Maladies contagieuses emportent tous les ans dans les paroisses de la Campagne une infinité de personnes, faute de Remèdes, et de secours. Ceux que les Sieurs intendants demandent, arrivent souvent trop tard, et la grande quantité que l'on en envoye toutes les années, coute au roy considérablement. Pour prévenir la perte de tant de Peuples, on propose de faire trouver toujours dans toute l'étendue du Royaume des Remèdes spécifiques contre les différentes espèces de maladies. Ils seront adressez aux sieurs Intendants des provinces qui auront soin de les faire distribuer aux pauvres du royaume."

the state coffers. Desmaretz delegated the task of examining the proposals to his long-time assistant, Jean-François Charmolüe de la Garde, who would then produce an abstract or report summarizing its main points. Those that passed this initial reading and met with Desmaretz's personal approval might see their authors invited for a personal audience. The proposal might be amended in consultation with other officials, and then it would be accepted or rejected in the Royal Council of Finance. If accepted it would be reworked into a royal edict or decree.[114]

The medical nature of Helvétius' proposal may at first seem anomalous within such a corpus, but three factors establish why it would be of interest to the office of the Controller-General. First, as we shall see, Helvétius had cultivated an extensive relationship with Desmaretz's predecessor Michel Chamillart and the provincial intendants who answered to him, and his distribution system was closely tied to the state tax infrastructure. Second, as Gary McCollim has noted, one of the most prominent methods of expanding revenue that was advised in the proposals was to create and sell new venal offices, privileges, or rights, a class of proposal within which Helvétius's falls.[115] Perhaps most importantly, Helvétius' remedies represented a relatively cheap way of improving mortality in the provinces, both in the light of the economic costs of epidemics in rural areas as well as persistent anxieties that France was declining in population, as we shall see.

Helvétius' proposal, as well as De la Garde's report, provides invaluable information about the extent of Helvétius' operations between 1706 and 1709, as well as

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[114] Gary B. McCollim, *Louis XIV's Assault on Privilege: Nicolas Desmaretz and the Tax on Wealth* (Rochester, NY: University of Rochester Press, 2012), 128–159.

[115] Ibid., 136–137. On the phenomenon of venality of offices more broadly, see William Doyle, *Venality: The Sale of Offices in Eighteenth-Century France* (Oxford: Clarendon, 1996).

his ideas about how an expanded version of it could be financed and delivered. Within the scheme he proposes, each village in a given *generalité* (the territory administered by an intendant) would receive fifteen *livres* worth of medicine at the price of five *sous* per dose, the customary rate paid by the king.[116] With this modest investment, he argues, the Intendants will be able to greatly reduce the large numbers of deaths that occur in rural parishes for lack of available medical care, especially with the most common rural ailments, such as dysentery, sustained and intermittent fevers, colic, asthenia (*langueur*), all of which can be cured through prompt evacuations, and can be prevented from recurring through taking stomach-fortifying cordials.[117]

The proposal also shows that, by this point, Helvétius had expanded from his dysentery specific to include a veritable therapeutic armamentarium of twelve medicines, dispatched to the provinces in chests.[118] These were accompanied by clearly-written "Mémoires instructifs" for those who will distribute them, on their use, dosage, and storage, and by a copy of his own *Traité des maladies les plus fréquentes*, which provides a short introduction to medicine, including the rudiments of pulse taking and uroscopy, instructions for the delivery of the different medications included in each chest, and recipes intended to feed convalescents on 2 *sols* each per day.[119] Where possible, Helvétius intends for local surgeons to be charged with distribution, but in cases where none are available Helvétius envisions lay distributors that will be able to "diagnose by the numbers" through the use of his *Traité*:

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[116] AN $G^7$ 716, "Placet à Monseigneur Desmaretz," fol. 2v.

[117] Ibid., 9r.

[118] These are: l'or potable; l'elixir de la vie; quintessence d'absinthe; poudre de corail anodine; poudre specifique (contre dysenterie); poudre febrifuge purgative; poudre vomitive; poudre tempérente; poudre sudorifique; pillules purgatives; baume diuretique; and pilules d'alun.

[119] Ibid., 6r-8r.

> Though these measures we can save a very considerable number of men for the King each year: for the diseases of country people mostly come from an abundance of raw and bilious humors, caused by an excess of work, and by bad food. As such it is normally only necessary to have a remedy that can release the poor sick when they feel stricken. They will simply have to look in the table of my *Traité* to find the disease which they believe afflicts them, and they will straight away find a Specific Remedy which is precisely suitable to their illness, along with the conduct and the regimen that they should follow to make good use of it.[120]

The notion of the medical specific is here crucial: once a diagnosis has been established, they will know which one to use in each particular case, and can then refer to the *Mémoires instructifs*:

> I have had short *mémoires* printed in which the virtue and usage of each Specific Remedy is briefly described, to the last detail. My goal was to avoid confusion and to facilitate the method of using these remedies even to the least experienced.[121]

But how will the remedies and instructions reach the rural parishes and the newly minted medics in the first place? Helvétius ingeniously proposes that the medicines will reach the rural poor by travelling down the one connection that connects them all to the crown: the tax system. He observes that this system, which is already operating in several intendancies, could be extended throughout the kingdoms by royal edict. The medicine chests would be sent out to each intendant, who would then provide them to the receivers of the *taille* (the direct land tax) in each *bourg*. The receivers would in turn provide the medicines to seigneurs, syndics, parish priests, and surgeons, who would be charged with

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[120] "Par ces établissements on peut sauver tous les ans un nombre très considérable d'hommes au Roy; Car les Maladies des Gens de la Campagne ne viennent la plus part que d'une abondance d'humeurs crües et bilieuses causées par un excez de travail, et par la mauvaise nourriture. Il ne s'agit pour l'ordinaire que d'avoir un Remède présent pour dégager ces pauvres malades dans le tems qu'ils se sentent frapper. On n'aura qu'a chercher alors a la table de mon Traité, la maladie dont on les croira attaquez, et on trouvera sur le champ un Remède spécifique qui conviendra précisément a leur mal, avec la conduite, et le régime qu'ils doivent observer pour en servir utilement," Ibid., 8v.

[121] "J'ay fait imprimer de petits Mémoires dans lesquels la vertu, et l'usage de chaque Remède spécifique est décrit en abrégé, et avec la dernière exactitude. Mon but a été d'éviter par la confusion, et de faciliter aux gens mesme les moins experimentez la manière d'employer les Remèdes prescrits," Ibid., 9r.

them. These distributors would actually pay the receivers of the *taille* an advance for the medicines: this advance would travel back up the tax system through the Receivers General of each *généralité* and ultimately to Helvétius, to support the costs of production.[122] The distributors would then be able to recover their advance and fund the charitable dispensation of the remedies through the sale of a portion of them to those wealthier patients who were able to pay. Medicine would thus flow down to the rural poor through the same channels by which non-noble landowners were taxed.

The notion of the rural poor being provided with low-cost medicines by the state through its tax infrastructure strongly implies that the main goal of the state is to keep them healthy enough to pay their taxes and serve as soldiers. It also shrewdly insures Helvétius from any defaults by obliging the distributors to pay the Receivers General in advance. From the royal perspective, it would also have the advantage of costing nothing: the normal charitable distribution of Helvétius's remedies in fact cost the crown tens of thousands of *livres*, as we shall see. As far as I have been able to ascertain, these cost-saving measures was never actually enacted, and the Controllers-General simply paid Helvétius in installments for the drugs, rather than downloading the costs onto the distributors.

Helvétius' argument also points to the limited sources of medical care available in rural areas, where barber-surgeons were often the most common medical practitioners. He argues that his system will save the sick in areas that are not served by a surgeon from having to call one in from a neighbouring town, which, he observes, often costs 30 *sols* just to get them to travel out, another 20 *sols* for a medicine, 6 for bloodletting, and 10

[122] Ibid., 9v-10r. For a succinct description of the activities of the *taille* receivers and the Receivers General, see McCollim, *Louis XIV's Assault on Privilege*, 27–29.

*sols* for an enema. In such cases the poor often die for lack of care, while his system will ensure that they receive prompt aid.

Sensitive to the interests involved, Helvétius also recognizes that this could upset rural surgeons by depriving them of business. In response, he argues that this objection is not strong enough to overcome the general utility of his project, and he has even made provision for means by which the surgeons themselves could profit by his system rather than loosing anything by it. A fixed cost of 5 *sols* per dose will enable surgeons to sell the medicines for higher rates to those who can afford them, which will in turn underwrite the costs of distributing them charitably to the poor. Further, the medicines will in fact attract more patients to the surgeons. Even when distributing the drugs charitably, the surgeons could still be permitted to charge patients for the visit or for ancillary procedures like bloodletting. As such, the distribution of his remedies will make them a small profit in the short term and possibly improve their reputation in the long term, especially if they use his remedies to treat the rich, who, he observes, can prove to be very generous in their gratifications when cured, something he virtually guarantees his medicines will be able to effect.[123]

In villages without surgeons, the parish priests will be able to announce in their sermons that the local syndics are furnished with his remedies by the Receivers General, and in cases where funds are lacking to pay the advance, the priests can hold a charitable fundraiser (*queste*) for the poor in the parish. He writes that even if each parishioner can only spare a single *sol* each month, it would be enough to recover the costs in most cases.[124] In his report on the proposition, De la Garde adds yet another funding scheme to

[123] Ibid., 10v-11r.
[124] Ibid., 11r.

those Helvétius proposes: alms could be collected from the various tax farms to supply the advance.[125] If the cost were indeed recovered by the distributors (as Helvétius assumes they could be), the surplus could be used by the Intendants to found new establishments for the Daughters of Charity to extend their teaching and nursing activities wherever they see fit, and that the nuns could then serve as distributors for Helvétius' remedies.

To what extent had this system been implemented in the years running up to 1709? An assessment of the scale that Helvétius' distribution system had already attained is available from the report on Helvétius' petition that De la Garde prepared for Desmaretz. According to the "Etat des remèdes que le sieur Helvétius a fournis à Messieurs les Intendants des Provinces depuis quatre ans," written in a different hand and appended to de la Garde's report, the figures for 1706-1709 were, respectively, 60,000, 48,000, 59,000, and 47,000 *prises* (packaged doses), for a total of 214,000 *prises* over four years. This means that Helvétius was providing an average of over 53,000 *prises* of his various remedies annually in the first four years of his operation, a figure which by 1721 had doubled to reach 100,000 *prises*.[126] As the report specifies, his remedies had been sent to nineteen *généralités*, with nine remaining that had not yet received any shipments, most of which are in the Midi. The report observes that this is more likely due to simple ignorance of the fact that the king provides this charity, rather than a lack of need in those provinces.[127]

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[125] "Le moyen naturel de faire fournir ces remedes qu'il en coutat rien au Roy seroit d'en prendre le fond par forme d'aumones sur tous les traittez, fermes et sous-fermes, baux et marches que les gens d'affaire font avec le Roy," AN G7 716, "Mémoire" (de la Garde), 1v. It is not entirely clear if de la Garde means for this to happen alongside the means suggested by Helvétius, or as an alternative to them.

[126] See below, AN E 2027, fol. 219-220; AN E 2032, fol. 204-205.

[127] AN $G^7$ 716, "Etat des remèdes que le sieur Helvétius a fournis à Messieurs les Intendants des Provinces depuis quatre ans," appended to the "Mémoire (de la Garde)." The provinces listed as not yet

If Helvétius was already providing the remedies to the provinces on an ad hoc basis, what reason was there to give him an office? From the perspective of the crown, the most basic reason was to gain the funds from selling it to him: De la Garde's report assigns a price of 50,000 *livres* for the office.[128] Helvétius also provided two reasons. The first was to streamline the service by securing a stable funding scheme and annual delivery rate, which would cut back on the delays in the existing system, whereby (as De la Garde emphasizes) intendants often request remedies from the Controller-General too late, especially during epidemics, leaving Helvétius to provide them after the peak of when they were needed.[129] The second, already suggested above, was to extend the service to the remaining provinces, which he speculated were not currently being served mainly because their intendants were not aware of the possibility. From Helvétius' own perspective, the proposal may also have helped ensure that the distribution of his remedies would continue under Desmaretz, who had taken over the office of Controller General from Chamillart a year earlier.

How was the petition received? As far as can be told from the surviving items in the Controller-General's records, the proposal was deemed admissible by De la Garde, but it seems to have been delayed nearly a month before reaching Desmaretz, during which time Helvétius wrote two letters reminding the Controller-General of it and requested an audience. It is not clear whether or not Helvétius was granted his audience, but we know his petition was ultimately denied: a note on the report, dated October 8, 1709 and written in Desmaretz' hand, reads "the king does not want to establish this

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having received Helvétius' remedies are: Châlons-en-Champagne, Lyon, Riom, Allençon, Caen, Grenoble, Aix, Languedoc, and Perpignan.

[128] AN $G^7$ 716, "Mémoire" (de la Garde), 2v.

[129] AN $G^7$ 716, "Mémoire" (de la Garde), 1r.

office."[130] Although the practice would not crystallize into an office and be extended across the whole kingdom, the proposal likely had the effect of providing Desmaretz with an idea of his operations, crucial from Helvétius' perspective for extending an existing practice under Chamillart into the new ministry of Desmaretz and later ensuring that it would pass on to his own son.

The rejection of Helvétius' 1709 proposal did not mark an end to his role as state medical contractor. The intendants continued to request and receive medicines. A surviving "Etat de ce qui est dû au Sieur Helvétius" for his services from July 1710, shows that in the first five months of that year he had already supplied 26,620 *prises* of his drugs to the provincial intendants. [131] The total bill of 6,767 *livres* also vastly exceeds his 1,000 *livre* pension as a physician to the Duc d'Orléans in this period.[132] Unique among surviving documents, this *état* provides a breakdown of the different "menus frais" associated with the chests he sent to the intendants, for example, the printing of the "mémoires instructifs" and the *Traité*, the packaging (*embellage*) of the medicines, various containers (*pots*, *fioles*), a scale and set of weights for measuring the medicines, and finally the price of the "caisse" which contained all of these items. This list of small expenses, usually added up to about 16 *livres* per chest.[133] No figures are provided for the costs of the plant simples and other ingredients of the medicines themselves,

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[130] "8 Oct. 1709. Le roy ne veut point etablir cette charge," Mémoir, Le Sr. Helvetius médecin de Monsieur le duc d'Orleans, 6 fols. Note on 1r, top left.

[131] Pennsylvania Historical Society (PHS), Simon Gratz Autograph Collection, case 12, box 20, folder 67, "Etat de ce qui est dû au Sieur Helvétius Médecin pour 26,620 prises de ses Remèdes spécifiques qu'il a fourni à messieurs les Intendans des Provinces par les ordres de Monseigneur Desmaretz, depuis le dernier Mémoire qu'il a eü l'honneur de presenter à Sa Grandeur, au mois de Juillet 1710."

The chance survival of this document in the collection of a nineteenth-century Philadelphian autograph collector, signed by Helvétius, is the only bill I have found from Helvétius for his services. All other payment data comes from the authorisations dispatched by the royal council to the Controllers General, and do not include any information beyond the total figures. With thanks to David W. Smith for referring me to this source.

[132] *L'état de la France*, 2 vols. (Paris, 1712), 2:131.

[133] PHS, Gratz collection, case 12, box 20, folder 67, "Etat de ce qui est dû au Sieur Helvétius."

unfortunately, but this mundane list of items serves as a hint of the proto-industrial scale of production that must have been necessary to annually supply dozens of these chests, containing hundreds of packaged doses, to the provincial intendants.[134] Based on the earlier relations with ipecacuanha suppliers in the 1680s, it seems very likely that the production of these chests required complex commercial connections to secure exotic simples, which may have been facilitated by Helvétius' state connections as well as the service of French consuls in cities like Cadiz. They probably required the employment of a labor force to collect the locally available simples that went into the production of the dozens of other drugs that were included in each chest.[135] We can also infer that Helvétius operated a "laboratoire" with a chymical furnace, as provided for by his letters patent. He very likely required the services of laboratory assistants for the various tasks of distillation, extraction, and compounding, not to mention the final packaging of large volumes of substances into individual doses. Lacking archival documentation which could shed light on these issues, however, they must remain inferences for the time being.

What we can say for certain is that by the 1720s, "Helvétius père et fils," as they appear in the *arrêts* of the King's Council, were being paid over 30,000 *livres* for standard annual orders of 100,000 packaged *prises* of their remedies.[136] The *arrêts* show that supplemental shipments were also ordered, likely in response to unexpected demand

[134] Unfortunately, so far as I am aware there is no study which explores proto-industry in relation to the production of medicine. For a survey of the phenomenon more broadly, see Sheilagh C. Ogilvie and Markus Cerman, *European Proto-Industrialization: An Introductory Handbook* (Cambridge: Cambridge University Press, 1996).

[135] See below, ch. 5, on the labor force employed by Guerin and Lajutais to produce the *poudre fébrifuge*.

[136] AN E 2027, fol. 219-220 (March 29, 1721); AN E 2032, fol. 204-205 (June 5, 1722). Both *arrêts* authorise the *Ferme général* to pay "Helvétius père et fils" a total of 30,000 *livres*, broken into instalments, for the delivery of 100,000 *prises* of their remedies, "avec les imprimez d'instructions pour l'usage desd remèdes, boetes, fioles, potes, ballances, caisses , et embellages." The payments in this period were made via Charles Cordier, chargé de la Regie des Fermes Generales.

or epidemics.[137] The shipments destined to the provinces were received by Jean-Jacques Jacquin, *commis* at the Paris Customs Office (*Bureau de douannes de Paris*), who organized their transportation.

What did the shipments he sent to the intendants contain in this period? By 1722, each chest was standardized to include seven distinct drugs in various quantities for a grand total of 353 *prises* per chest, and a much smaller quantity of seven vials of perishable substances (vials of different cordials, a *boulle medicamenteuse*, a few ounces of theriac, etc.). Twelve such chests were sent to each intendant for distribution, accompanied by a larger thirteenth chest with bulk quantities (rather than separate doses) of some of the drugs (cinchona and theriac, for example) and associated cordials and balms. Alongside the drugs, each chest also contained the "mémoires instructifs," copper weights and a set of scales for weighing the drugs. The text of the inventory specifies that these chests are delivered independently from those sent with the armies and "are to be distributed by the intendants to their subdelegates, and by the subdelegates to the women religious, surgeons, or other intelligent persons in the cities, towns, and villages of their departments." [138] The inventory concludes by requesting that the intendants monitor the usage of the chests in order to determine if certain drugs are used up faster than others in given regions and to write to him via the Controller-General to request more; and to send him a relation of the nature of any epidemics that strike the region so that he may send appropriate drugs and provide the necessary counsel. This last provision appears to have been put into effect during the Great Plague of Marseille in 1720: the records of the

[137] See for example AN E 2032, fol. 110r-v (April 25, 1722), a 2,000 *livre* payment to Helvétius for 4,000 *prises* sent to Caen and 4,000 to Provence.

[138] A standard box inventory and prospectus are provided in Lafond, *La dynastie des Helvétius*, 141–145.

Controller General show that extraordinary shipments of Helvétius' remedies were dispatched to Provence as part of royal relief efforts.[139]

One remarkable feature of this distribution system is that it generated numerous archival records which allow the shipments to be tracked with regularity in the French departmental archives from the late 1720s onward.[140] Brittany and the Auvergne offer instructive examples. In both cases, we can then follow the annual delivery of thirteen chests, and it is usually even possible to see exactly what villages they were sent to. Receipts and "états de distribution" from the local subdelegates are generally available and for some years even the letters of surgeons, priests, nuns and other "charitable persons" who actually delivered the drugs into to the hands of patients have survived. The importance of the Daughters of Charity for the drugs distribution is particularly apparent in the surviving documentation. Their letters often thank the intendant, the king, and Helvétius for the remedies, report on their good effect in bringing relief to the local poor, and in some cases, inform the intendants of any delays or irregularities in the annual delivery of the drugs from the subdelegates.[141] Following Helvétius' express advice, some distributors would also write back to the intendant with reports on which

[139] AN $G^7$ 1729 no. 44; $G^7$ 1730 no. 262; $G^7$ 1731 no. 20; no. 185.

[140] My own survey draws on the intendancy fonds (series C) of the Ille-et-Villaine and Puy-de-Dôme departmental archives. The survey I present here barely scratches the surface of these voluminous fonds, and I intend to return to them in a subsequent publication. Although records of the distribution of Helvétius drugs appear to be a standard features of intendancy fonds, no study of the overall phenomenon exists, although a smattering of dissertations and articles, usually focusing on local charitable care, have made use of these fonds in the Languedoc and Brittany: see Simone Mirr, "Médecine des pauvres dans les campagnes du Languedoc au XVIIIe siècle" (Thèse de doctorat en Médecine, Université Montpellier 1, 1992); René Fresneau, "Les boëtes d'Helvetius dans les épidémies en Bretagne, au XVIIIe siècle" (Thèse de Médecine, Université de Paris, 1946); Christine Nougaret, "La lutte contre les épidémies dans le diocèse de Rennes au XVIIIe siècle," *Bibliothèque de l'école des chartes* 140, no. 2 (1982): 215–33; Lafond, *La dynastie des Helvétius*, 148–199; Jean Hossard, "Les « remèdes du Roi » et l'organisation sanitaire rurale au XVIIIe siècle," *Revue d'histoire de la pharmacie* 63, no. 226 (1975): 465–72.

[141] See for example AD Ille-et-Villaine C 1330 (1731), Mother Superior of the Daughters of Charity of Plouën to De La Tour, May 16, 1731; (1732), M. Duchon, Daughter of Charity at Vannes, to De La Tour, 26 May 1732; (1735) Sister Therèse, Daughter of Charity at Saint-Méen, to Pontcarré de Viarmes, 21 May 1735.

remedies were in highest demand, allowing each new shipment to adapt to the demand in the previous year.

The shipments can be tracked in particularly minute detail in the *généralité* of Rennes from 1729 onward, as can the numerous problems that arose in their distribution. In 1733, for instance, the Controller-General Philipert Orry requested manifests from the intendants of where they were sending the remedies and who was entrusted with their distribution. Orry learned from these manifests that the intendant in Rennes, De La Tour, was disobeying the king's wishes by distributing most of his annual shipment in the city of Rennes and other towns (Vannes, Saint-Brieuc, Quimper and Dol), where the poor had recourse to the established hospitals, rather than sending the drugs out to the countryside as he had been ordered to do.[142] A similar problem occurred in 1735, in the *généralité* of Clermont, where the intendant was likewise redirecting the remedies to the urban hospitals.[143]

In addition to being improperly directed, the system could also be wholly overwhelmed. In the fall of 1741, for example, after the normal shipments of remedies had already been distributed, Brittany was struck by an epidemic of dysentery. The intendant requested additional shipments of Helvétius' remedies, but the Controller General refused to allocate the funds, advising the intendant to raise them charitably from the local nobility and ecclesiastic landholders in each parish that had been struck. A circular letter was printed to explain the situation. Some parishes succeeded in raising the funds, and Helvétius sent them additional shipments of his drugs.[144] Helvétius also

[142] AD Ille-et-Villaine C 1330, Orry to De La Tour (Rennes), September 30 and October 26, 1733.
[143] AD Puy-de-Dôme, 1C 1382 (1735).
[144] AD Ille-et-Villaine C 1331, Orry to Pontcarré de Viarmes (Rennes), October 30 and November 7, 1741; printed circular, "A Rennes, 4 Novembre 1741."

received reports from local medical officials and provided advice to the intendants. In some cases his letters were printed as short pamphlets and circulated to the distributors in areas struck by the epidemic as supplemental instructions on how to manage the epidemic. In one notable case, Helvétius distinguished between different forms of dysentery and also tied the disease to the quality of local water, advising peasants to boil their drinking water with nails or some other rusty iron in order to purify it.[145]

The patients who received these drugs are usually referred to in general terms—"pauvres de la campagnes," "paysans," "dysenteriques"—but on occasion the distribution of the remedies can even be followed down to the individual patient. The subdelegate Aulterroche, based in the town of Issoire in the *généralité* of Clermont, sent with small scraps of paper (including a playing card in once case) on which the allotments of individual doses are written, sometimes mentioning the name or occupation of the patient.[146]

Some intendants also received remedies for charitable distribution from other sources. In addition to the chests of Helvétius' remedies, the intendants of Clermont also received the *pastilles* and *onguent divin* of the *médecin du roi* Jean-Baptiste Chomel (1639-1720) and later his son Pierre-Jean-Baptiste (1671-1740).[147] The distribution of these remedies was managed through the episcopal infrastructure by the archbishop,

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[145] *Nouvelle consultation de M. Helvetius sur deux especes de Dyssenteries, l'une appellée Séche, et l'autre suivie de Pourpre. à Versailles ce 24 septembre 1741* (1741). Copy in AD Ille-et-Villaine C 1331.

[146] AD Puy-de-Dôme, 1C 1383 (1738).

[147] Although he pays only incidental attention to the distribution of these remedies, the best description of the Chomel family is David Sturdy, "Pierre-Jean-Baptiste Chomel (1671–1740): A Case Study in Problems Relating to the Social Status of Scientists in the Early Modern Period," *The British Journal for the History of Science* 19, no. 3 (1986): 301–22. BnF ms. fr. 6801, Dépenses pour les Établissements charitables, arrêtées de la main du Roi et des ministres (1714-1791), fol. 324-346, contains a series of *mémoires* on Chomel remedies operation, dating from the 1730s.

rather than trickling down through the local subdelegates.[148] The intendants in Rennes, by contrast, seem not to have received Chomel's remedies, or else they were distributed directly to the archbishop there and have left no trace in the intendancy fonds.

Adrien Helvétius died on February 20, 1727.[149] By the end of his career, he had no doubt amassed a fortune, not to mention numerous honours at Versailles. He had been appointed physician to the Duke of Orleans, the future Regent, in 1701. On January 7, 1708, the year before submitting his proposal to Desmaretz, he was appointed Inspector general of the French military hospitals in Flanders. From 1705 onward, he also served in a variety of diplomatic roles, most notably as a peace "feeler" in the Netherlands under the pretext of visiting his father, and in Madrid under the cover of providing medical services to the queen of Spain in 1714. In January of 1724, he was ennobled.[150] His son, Jean-Claude Adrien Helvétius (b. 1685), studied at the Paris Faculty, graduating in 1708, and became a *médecin ordinaire* to Louis XIV and Louis XV, and later first physician to the queen, Marie Leszczyńska, in 1728. He had apparently been assisting his father with production of the remedies for the provinces, and after his father's death in 1727 he took exclusive charge of the operation until his own death.[151]

Following the distribution of Helvétius' remedies to the provinces through the eighteenth century would of course be a project in itself, but it suffices to say here that the practice continued with some regularity beyond even the death of Jean-Claude Adrien Helvétius on July 17, 1755. His son, Claude-Adrien, did not continue the three-generation

[148] AD Puy-de-Dôme, 1C 1381, esp. folders for 1733 and 1734, the latter of which includes a letter from Chomel himself to the intendant, and a prospectus of his remedies. The folders for 1735-1738 also include numerous printed instructions for Chomel's remedies: 1C 1382

[149] For his *acte de décès* see Lafond, *La dynastie des Helvétius*, 65.

[150] Ibid., 52–65.

[151] Ibid., 153.

family tradition in medicine but became a *Fermier*—a royal tax farmer—likely an office opened to him by his family's court connections: the *Fermiers*, after all, were those who annually paid Adrien and Claude Adrien Helvétius for their annual shipments. He retired from this position at the age of 33 to practice philosophy.

The "Remèdes du Roi" operation, as it came to be called, passed briefly into the hands of Jean de Diest, a regent doctor of the Paris Faculty, and then in 1762 to Joseph-Marie-François de Lassone, then first physician to the queen. According to Brockliss and Jones, "the service had become a cottage industry for the Lassone family," and Lassone worked with his son and Claude-Melchior Cornette to develop new remedies, and that "by the 1780s, the Lassone enterprise was in the enviable position of being both monopoly producers and supplier of the drugs in a sizeable, but cosily protected, market." In what stands as the only instance I have found where the operational costs and profits of the whole enterprise were estimated, Lasonne was accused in the 1760s of spending 18,000 *livres* on production annually and charging the government 55,000 *livres* for the drugs, which tallies up to a 68% profit margin.[152] Lassone's own son took over at his death in 1788, on the eve of the revolution, and oversaw the distribution of a final shipment of the remedies on April 12, 1790.[153] The system appears to have been interrupted by the Revolution, but was re-established under the Empire in 1805.[154]

We have already seen that Helvétius' role as a military contractor was not wholly unique in this period. It is also worth posing the question here of how unique Helvétius'

[152] Brockliss and Jones provide a good account of the operation once it was in Lassone's hands: see Brockliss and Jones, *The Medical World of Early Modern France*, 731–734.

[153] Ibid.; Lafond, *La dynastie des Helvétius*, 186–189.

[154] AN $F^8$ 2, dossier VI, Police sanitaire, Distribution de médicaments an XIII-1815, Rétablissement de la fourniture annuelle des boîtes de médicaments pour les épidémies, an XIII. Lafond, *La dynastie des Helvétius* 145-146.

medicine chests and his distribution system were in the decades around 1700, both in France and abroad. The German context provides a near-contemporary analogue in the form of the "physic chests" produced by the philanthropic Francke Foundations (*Franckesche Stiftungen*) of Halle.[155] The Foundations financed an orphanage and other activities through the sale of proprietary drugs, which they distributed in Germany and Russia and also shipped through an extensive network of German Pietist clients in Britain's North American colonies, as well as to their own missions in India. Although it did not supply the state or the military, the Francke pharmaceuticals are perhaps the most comparable operation to that of Helvétius, and both emerged at virtually the same time.

Helvétius' chests and those of the Francke Foundations can be compared on five points. First, the success of both rested on a privilege. In 1698 Francke Foundations received its privilege from the Elector of Brandenburg which exempted it from the corporate privileges of the urban apothecaries.[156] In a manifestation of the distinct differences with centralizing "absolutist" France—where a single royal privilege could suffice—the fragmented political conditions of the Holy Roman Empire obliged the Foundations to secure multiple monopoly privileges for their drugs in a number of jurisdictions beyond Halle.[157] Second, although the organizational framework differed greatly, both Helvétius' distribution of remedies to the French provinces and the networks of the Foundations were driven by a charitable imperative. Third, the Foundations possessed a similarly global breadth to Helvétius' operation: as we shall see

[155] Renate Wilson, *Pious Traders in Medicine: A German Pharmaceutical Network in Eighteenth-Century North America* (University Park, Pa.: Pennsylvania State University Press, 2000).

[156] Ibid., 67–68. Wilson points out that the provision for pharmaceuticals was part of the overall privilege for Francke Foudnations. It was intended to enable the orphanage to produce its own medicines without needing to have recourse to the town apothecaries "at night and in the winter," but was leveraged into an overall source of funding for the whole Foundations, ultimately providing between one-third and half of their total income in the eighteenth century.

[157] Ibid., 78.

in Chapter 6, Helvétius' operation extended to Southeast Asia, and the Francke Foundations extended to Russia, India, and America. The fourth and most conspicuous similarity is in the material format of their deliveries: both the Francke and Helvétius operations diversified their production into a full range of proprietary drugs in the 1710s, assortments of which were packaged in "physic chests" which included single-sheet instructions alongside the publication of an overall guide to health and sickness grounded in the use of their proprietary drugs. Finally, it should also be mentioned that although the Francke Foundations do not appear to have had close links with the military, they did receive an order from Frederick William I, King of Prussia, in 1734 to provide their "physic chests" for an army of 10,000 men, and most of their sales went through wholesale and retail networks, rather than being sold to the state for military or poor relief efforts, or to "corporate consumers" of the kind detailed in Chapter 6.[158] As such, although the Francke "physic chests" bear numerous similarities to those of Helvétius, they also highlight the distinctly French character of Helvétius' operation, which was centralized and closely tied to the fiscal-military state.

It should also be mentioned that the distribution of Helvétius' remedies also had at least one precedent in France. As early as 1672, Gabriel Calloet de Querbrat (or Caloet-Kerbrat), an *avocat* at the Bretagne Parlement who was connected with the *dévot* Compagnie du Saint-Sacrement, had advocated that inexpensive remedies should be distributed charitably, at royal expense, to the poor peasants through the episcopal

[158]Wilson provides detailed information on the net profits of the Francke pharmaceuticals over the course of the eighteenth century, but nothing that would enable a comparison to either Helvétius and Lajutais, as my information includes only sales by unit and by revenue, but not profits, which in both cases would require information on production costs, which is unfortunately absent. Wilson is undoubtedly correct, however, that their net profits, which varied between 20,000 and 35,000 *Reichstahlers* per anum, must have put them in the highest tier of European pharmaceutical production in this period. Ibid., 90.

infrastructure as well as to soldiers and sailors.[159] This plan would be realized in part by Chomel, whose *pastilles* and *onguent divin*—commonly called "les remèdes des pauvres"—were distributed through the same infrastructure as Helvétius' chests into the 1730s.

### *6. Conclusion*

This chapter has followed Adrien Helvétius as he transformed ipecacuanha through courtly practice, military-medical contracting, and finally to the state-sponsored charitable distribution of his remedies to the French provinces, a practice which outlasted the Ancien Régime itself. While the utility of his drugs to the military was already apparent during his 1687 hospital trials, the precise rationale behind the state's massive investment in supplying his drugs to the provinces is less clear. We can read it as a development of Helvétius' private acts of charity, noted by Saint-Simon and others, which included the regular consultation hours and the distribution of his drugs *gratis* to those who could not afford to pay for them.[160] But charity on this scale had important costs: Helvétius' crowning achievement was to find someone or something he could bill for such costs, namely, the state itself. This raises the final question: why was the state, in the form of the Controller-General and ultimately Louis XIV himself, willing to pay

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[159] Gabriel Calloet-Kerbrat, *Pour etablir dans touttes les paroisses du Royaume, sans qu'il en couste rien à personne: L'accord des procez et des querelles, et la distribution des remedes pour les Pauvres gens de la Campagne* (S.l.: s.n., 1672); Jean-Luc Bruzulier, "Saint Yves, Modèle Pour Les Dévots Bretons Du XVIIe Siècle? : L'exemple de Gabriel Calloët Kerbrat, Avocat Général Des Pauvres," in *Saint Yves et Les Bretons : Culte, Images, Mémoire (1303-2003)*, ed. Jean-Christophe Cassard and Georges Provost (Rennes: Presses universitaires de Rennes, 2015), 241–53; Jean-Pierre Gutton, "Aux origines d'un ministère de l'Assistance et de la Santé dans la France de l'Ancien Régime," in *Histoire du droit social: mélanges en hommage à Jean Imbert*, ed. Jean-Louis Harouel (Paris: Presses universitaires de France, 1989), 287–93; Lafond, *La dynastie des Helvétius*, 125.

[160] "Il y avait pourtant longtemps qu'Helvétius était à Paris, guérissant beaucoup de gens buttés ou abandonnés des médecins, et surtout les pauvres qu'il traitait avec grande charité; il en recevait tous les jours chez lui à heure fixe tant qui voulait venir, à qui il fournissait les remèdes, et souvent la nourriture, " Louis de Rouvroy Saint-Simon, *Mémoires (1691-1701) Additions au Journal de Dangeau*, ed. Yves Coirault, vol. 1 (Paris: Gallimard, 1983), 823.

thousands of *livres* per year to the distribution of remedies to the poor of the French provinces?

In the annual letters to the provincial intendants, Helvétius' drugs are framed as an exercise of charity by a benevolent monarch interested in the welfare of his subjects. But in the final decades of Louis XIV's reign, this spirit of *noblesse oblige* may also have taken on a special intensity through growing fears that the kingdom of France was slowly being depopulated. Although historical demographers now know that France had the largest population in Europe, and that its population was in fact growing in this period, many contemporary observers, including such prominent figures as the Archbishop François Fénelon, the Marquis de Vauban, and Pierre Le Pesant de Boisguilbert, highlighted the problem of depopulation and pointed to the suffering of the peasantry during epidemics, dearth, famine, and war, observed the desertion of rural villages, and fields going uncultivated.[161] Some, such as Vauban and Boisguilbert, even blamed the inequalities of the tax system for the destruction of the French peasantry, and advocated for its reform, in precisely the same years as Helvétius' remedies began to be distributed. Referring explicitly to the "Gens de la Campagne," Helvétius himself points out in his 1709 proposal that his remedies "can save a considerable number of men for the King each year," and it is conceivable that the annual distribution of hundreds of thousands of drugs through the infrastructure of the very tax system which had come under such scrutiny may, in fact, have been a measure intended to remedy the perceived problem of depopulation.

[161] See Carol Blum, *Strength in Numbers Population, Reproduction, and Power in Eighteenth-Century France* (Baltimore: Johns Hopkins University Press, 2002), esp. 4–10; Jean-Claude Perrot, "Les économistes, Les Philosophes et La Population," in *Histoire de La Population Française*, ed. Jacques Dupâquier, vol. 2 (Paris: P.U.F, 1988), 499–551; Joseph J. Spengler, *French Predecessors of Malthus; a Study in Eighteenth-Century Wage and Population Theory,* (Durham, N.C.: Duke University Press, 1942).

What we can say for certain is that, over the course of two decades, Adrien Helvétius had transformed ipecacuanha root from an emetic into a proprietary specific and had adapted it for mass distribution. By the end of the first decade of the eighteenth century, he had carved out a completely unique niche for himself in the European medical marketplace by supplying his drugs *en masse* to the largest possible clientele—the soldiers and peasants of Louis XIV's France—at the expense of the largest possible purchaser, namely, the fiscal-military state.

# Chapter 5

## The Lost Secret of the Chevalier de Guiller's *poudre fébrifuge*: Recovering Privileges and Securing Military Supply Contracts, 1713-1808

In July of 1768 an anonymous physician from Avignon made an inquiry in the *Mercure de France* concerning a "marvelous remedy" he had read about in an old pamphlet. The remedy in question was called the *poudre fébrifuge*, invented by one Chevalier de Guiller in the time of Louis XIV. The author writes that such a remedy would be of great interest to him, living as he does in a country ravaged by fevers, and asks the readers of the *Mercure* to respond if perchance they know anything about this drug and whether or not its secret had been lost after the death of its last holder, Pierre Brodin de la Jutais, two or three years earlier: "If to the contrary someone has inherited it, we implore them to announce it to the public."[1]

A few months later, he received a reply. In the pages of the September 1768 *Mercure*, the Marquis de Chambray offered some guesses about the medical secret of the drug and reported an interesting story he had heard about how Guiller had discovered it—a story told to him by M. Daubenton, *Commissaire général* and earlier the premier *commis* (clerk or administrator) for the navy office.[2] It seems that Guiller was French by

[1] "Si au contraire quelqu'un en a hérité, on le prie d'en faire part au public," "Lettre de M.***. Docteur en médecine à Avignon, de la société royale des Sciences de Montpellier, à l'auteur de du Mercure de rance, sur la poudre fébrifuge," *Mercure de France* (juillet 1768), 165-166.

[2] Almost certainly the agronomer Louis Marquis de Chambray, see André J. Bourde, *Agronomie et agronomes en France au XVIIIe siècle* (Paris: SEVPEN, 1967), 2:719; the former *commis* is either François-Ambroise Daubenton (1663-1741) or his son Jean-Baptiste (1690-1774); on both see Anne Mézin, *Les consuls de France au siècle des lumières (1715-1792)* (Paris: Ministère des affaires étrangères, 1998), 224–225.

descent but entered the employ of the Venetians and became a cavalry commander.[3] While serving in Dalmatia under the General Delfin,[4] he was sent to inspect a prisoner camp where he encountered an old Arab physician. The Arab had attempted to defect from the Ottomans to the Venetian army, but had instead been imprisoned by the Venetians as a spy. The Arab begged Guiller to speak to the General on his behalf. Guiller did, and secured the Arab's release. A few days later, Guiller was visited in his tent by the Arab physician, who, "as a mark of his gratitude, offered him the secret of a powder febrifuge, which he claimed to be infallible." Guiller accepted the gift, used it, recognized its efficacy, and "the love he had retained for his homeland inspired him to share it with France."[5]

De Chambray's account then details how the patriotic Guiller presented this *poudre fébrifuge* to Guillaume Le Blond (d. 1718), the French consul in Venice, who in turn informed the powerful Jérôme Phélypeaux de Pontchartrain (1674-1747), Louis XIV's Secretary of State for the Navy and the Royal Household. Le Blond sent a sample of Guiller's drug, and it was given to Guy-Crescent Fagon, the royal first physician. After a trial (*épreuve*) of the drug—the details of which are not specified—Fagon reported that the drug cured several (*plusieurs*) patients, but failed in the case of several others. The crown already had a more "certain" febrifuge in cinchona, and therefore would not

[3] Louis Marquis de Chambray, "Lettre sur la poudre fébrifuge de M. de la Jutais," *Mercure de France* (September 1768), 186-191.

[4]Probably Daniele Delfin (1656-1729), who led Venetian forces against the Ottomans in the Morean War (1684-1699) and the Ottoman-Venetian War (1714–18). See *Treccani.it: Enciclopedia*, http://www.treccani.it/enciclopedia/dolfin-daniele-detto-girolamo/ (accessed July 17, 2015).

[5] Chambray, "Lettre sur la poudre fébrifuge," 187-188.

purchase Guiller's secret, although he was to be commended for his "zeal" in the service of the king.[6]

The story could have ended there, but three years later Guiller was travelling in France on other business and came in person to the office of M. Daubenton, Chambray's source for the story, who was then an administrator in the navy office. Guiller asked that his febrifuge be tested again, fearing that the previous sample had spoiled en route or had not been properly administered. A second trial was organized by Pontchartrain and Fagon; this time around, it was found to be "infallible," having cured hospital patients suffering from all species of fevers.[7]

I have not been able to confirm every detail of the tale recounted by the Marquis de Chambray (which, it should be noted, was based on second-hand testimony at over fifty years remove from the events described), particularly the story of the Arab physician in Dalmatia. But we can be quite sure that in 1712, Ferdinand de Guiller was invited from Venice to the court of Louis XIV on the recommendation of the consul Le Blond in connection to the *poudre fébrifuge*.[8] The crown offered to buy the remedy, but Guiller told Fagon that he did not intend to profit from it; he simply hoped to have the satisfaction of being useful to his homeland. When the king was informed of the quality of the drug and of Guiller's lack of interest in personal gain (*désintéressement*), Guiller

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[6] Ibid., 188.

[7] Chambray, "Lettre sur la poudre fébrifuge de M. de la Jutais."

[8] See AN AE B$^{I}$ 1163, Le Blond to Pontchartrain, April 30, 1712, fol. 269: "J'espère que Votre Grandeur aura reçeu la lettre du S. de Guiller, que j'ai eu l'honneur de luy envoyer le 16 de ce mois, en la suppliant de m'en addresser la reponce." Ibid., September 3, 1712, fol. 251: "J'ai oublié samedy passé d'envoyer la lettre dud. Ferdinand de Guiller, qu'il m'a laissé avant son départ pour se rendre auprès de Votre Excellence, et pouvoir effectuer ce qu'il s'est engagé. Il est party avec son epouse prenant la route de Gennes." Unfortunately the attached letters in both cases have not survived. Le Blond is mentioned in the *Mercure* as well as the *mémoire* produced by Lajutais daughters in their later attempts to renew the privilege for the *poudre fébrifuge* in 1775: see ANM SRM 111 d 29, "62eme assemblé de 3 juillet 1775."

found himself amply rewarded: he was knighted in the royal hospitaller order of Saint Lazarus and granted a generous annual pension of 1,200 *livres* for his services. Alongside these honours, Guiller also received a royal brevet granting him exclusive sales for his *poudre fébrifuge* throughout France on September 30, 1713, which specifically underlined the drug's potential utility to the French army.[9]

This chapter traces the surprising fortunes of the Chevalier de Guiller's *poudre fébrifuge* through the eighteenth century. While my focus will be on the period from 1713 to 1737, the privilege and the medical secret of the *poudre fébrifuge* passed through the hands of three generations and was examined by three successive licensing regimes before the end of the century. Guiller himself secured the original privilege in 1713, but left no heir and took the medical secret of the drug with him to his grave in 1730. His death produced an exceptional series of events that opens a window onto the ways in which trade secrecy, medical privilege, and military contracts operated in this period. This chapter draws on a corpus of documents surrounding this drug, including account ledgers, correspondence, and military-medical reports, most of which were preserved as evidence in a vicious legal battle between the two medical entrepreneurs, Pierre Brodin de Lajutais and Étienne Guérin, who collaborated together to recover the medical secret and its accompanying privilege in the 1730s.

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[9] For the original parchment brevet, see AN $V^7$ 246 (6), dossier 3, item 2, "Brevet en parchemin du privilège accordé par le Roi audit Sieur Guiller pour la fabrication et vente de la Poudre Febrifuge," signed by Louis and Phelypeaux, September 30, 1713. This is so far one of only a handful of brevets I have found (most survive only as copies in the dispatch registers of the Secretary of State for the Royal Household).

In 1749 Lajutais or his daughters appear to have secured a copy of Guiller's original request for the brevet and the support letters of Fagon and Boudin from the dispatch registers of the secretary of state, held in the naval archives, which they later provided a copy of in their 1775 petition for the renewal of their privilege. The copy, which is certified authentic by Maurepas, Secretary of the Navy, also included an annotation in pencil in the hand of Pontchartrain, which reads: "Decision du Roy: Bon. Pension de 1,200 livres du jour qu'il est parti de Venize et la Croix de St Lazare." SRM 111B d 29 Lajutais.

The first section of the chapter will treat Guiller's original drug, its assessment by the first physician, Guy-Crescent Fagon, and the mixed results of a series of naval hospital trials undertaken in 1714. Particularly, it will extrapolate from the only surviving medical report of these trials to contextualize the *poudre fébrifuge* within the debates surrounding fevers and medicinal specifics in this period. The second section explores how Guerin and Lajutais managed to "rediscover" the secret and recover the privilege for the *poudre*, eventually exploiting it for their own gain as *entrepreneurs-fournisseurs* to army hospitals during the War of the Polish Succession (1733-1738). Here I draw primarily on evidence deposed during their later lawsuit, judged by a commission of the royal Conseil privé. This evidence includes their ledgers as well as the regular correspondence that was necessitated by their collaboration: Lajutais resided in Arles, where he was a tobacco manufactory controller, while Guerin was based in Paris but regularly shuttled between Versailles and the other abodes of the court to advance his and Lajutais' mutual projects. As much as the lawsuit itself, the simple fact of their partnership generated documentation of negotiations which otherwise would have gone unrecorded, most notably the various dealings at court necessary to secure privileges and contracts. Their ledgers also allow a glimpse into the mechanisms of remedy production and distribution, and allow for a comparison of the relative share of sales between consumer retail and government wholesale in the secret remedy trade. The third section of the chapter treats the two parts of the medical secret that formed the basis of the privilege, namely, the identity of the elusive *plante fébrifuge* and the recipe for its preparation. A fourth and final section briefly treats Guerin and Lajutais' falling out,

sketches the various legal debacles that followed it, and traces the legacy of the *poudre fébrifuge* to Lajutais' daughters, who resurrected the privilege once again in 1775.

The range and variety of the sources surrounding the *poudre fébrifuge* makes it an unusually rich case study. Add to this the fact that the story of the *poudre fébrifuge* is virtually unknown to modern scholarship, having received only a short notice by Maurice Bouvet in 1924 and passing mention in the more recent work of Alexandre Lunel.[10] Most importantly, Guiller's *poudre fébrifuge* confirms several features apparent in the case-studies of *orviétan* and Helvétius' *remède spécifique*. On the one hand, it provides further evidence for the link between medicinal specifics and the needs of the emergent fiscal-military state, which I have described in chapter 4. On the other, it provides an interesting contrast to the way medical secrecy and medical dynasticism played out in the case of the Helvétius and Contugy families by showing what can happen when the transmission of a secret is broken. As we shall see, such a situation could effectively prompt a new generation of would-be privileged vendors to reverse engineer a drug whose secret had been lost.

1. *In the shadow of cinchona: The criterion for testing Guiller's poudre fébrifuge, 1713*

The Chevalier de Guiller's *poudre fébrifuge* is unique among the drugs discussed in this dissertation insofar as a detailed medical report on its efficacy has survived. In most cases, documentation exists which suggests tests were undertaken prior to the granting of a privilege, whether these be a small number of personally supervised trials

[10] Maurice Bouvet, "Les facultés d'approvisionnement données par Louis XIV à un fabricant de remède secret," *Courrier médical* (May 18, 1924); Maurice Bouvet, "Histoire sommaire du remède secret," *Revue d'histoire de la pharmacie* 45, no. 153–54 (1957): 60; Alexandre Lunel, *La maison médicale du roi, XVIe-XVIIIe siècles. Le pouvoir royal et les professions de santé* (Seyssel: Champ Vallon, 2008), 279.

under the aegis of the fist physician, or larger trials on hospital patients, like those undertaken by Helvétius for his dysentery specific. The *poudre fébrifuge* provides the only case I have found in which an official medical report by an "independent" third party (that is, someone other than the vendor and the royal first physician) has survived. This report includes a detailed account of the trial cases and a theoretical evaluation of the internal effects of the drug. My goal in this section is to contextualize this report in contemporary debates about fevers, which have been treated in chapter 2, and to show how cinchona served as a "model" medicinal specific with which the *poudre fébrifuge* was unfavourably compared.

Several months before he was granted his full brevet, on June 20, 1713, Guiller was given royal permission to collect an unnamed "racine fébrifuge" wherever it might grow, including the forests of *communes* and nobles. The brevet further enjoined the officers of the royal waters and forests to cooperate with him in this endeavour.[11] By this point, we can assume that Guiller was being shepherded through the testing process necessary to secure a brevet by the first physician Fagon. The opening of the brevet also makes clear that it was granted upon the recommendation of Fagon and Jean Boudin, a royal physician in ordinary and former dean of the Paris Faculty, "after having undertaken experiments on a large number (*un grand nombre*) of patients who were all cured."[12] As a consequence of their report, "His Majesty ordered Sieur Guiller to prepare

[11] AN $V^7$ 246 (6), dossier 3, item 1, "Brevet pour la cueillette du racine fébrifuge," June 20, 1713, signed by Louis and Phélypaux with seal. These "medicinal foraging rights" were likewise reaffirmed when he received his full brevet: "Permet Sa Majesté aud. Sr. Guiller de faire la recherche de lad. racine febrifuge dans toute ses forests dans celles des communautez ou des particuliers et generalement dans tous les endroits ou il en decouvrira, et d'en prendre quantité dont il aura besoin, sans qu'il puisse estre empesché, attendu qu'il sagit bien, et de l'avantage public," AN $V^7$ 246 (6), dossier 3, item 2, "Brevet du Sieur Guiller pour la Poudre Febrifuge," September 30, 1713.

[12] Ibid.

a sufficient quantity both for his army hospitals and to be sold at a reasonable price to all those who need it to be cured."[13]At the outset, then, supplying the army is explicitly underlined as an objective. The expressed rationale for granting the brevet is to reward the inventor and provide assistance to royal subjects (following the conventional rhetoric employed in these sources). The brevet fixes the price of the drug at 10 *sols* per dose, and also specifies that Guiller could establish offices (*bureaux*) in other cities for its distribution—in effect granting franchises or concessions to subsidiary vendors.

The certificates from the first physician provide some insight into the process by which Guiller was rewarded with these privileges. Fagon reports that he and Boudin used Guiller's powder on a number of patients suffering from various types of intermittent fevers (tertians, double tertians, and quartans) and that it cured all of them, "even some who had not been cured by cinchona," a point which, as we shall see, was of crucial importance: the comparison to cinchona would come to be a persistent refrain surrounding the *poudre fébrifuge* in 1713 as in 1733. [14] Fagon also states that he knew of the plant that Guiller used (without mentioning its name) but that it had never been used before because of some drawbacks: it purged too quickly and caused "accidents." None of these drawbacks exist with Guiller's powder thanks to his innovative preparation.

Fagon's attestation thus tells us very little about the exact circumstances of the trials. Instead, it focuses on the character of the vendor and the expediency of the drug for military purposes. Fagon distinguishes Guiller from the common crop of charlatans by

[13] "Sa Majesté auroit ordonné aud. Sr. Guiller d'en faire preparer une quantité suffisante tant pour les hopitaux de ses armées, que pour estre distribué a un prix modique a tous ceux qui en auront besoin pour leur guerison," Ibid.

[14] AN $V^7$ 246 (6), dossier 3, item 16. Guerin would likewise later state that "deux ou trois prises de ce remedes guerissent plus seurement et sans crainte de retourt les fievres les plus opignatres que ne pourroit faire cinquante prises de quinquina ou de tout autre febrifuge."

emphasizing the *sincérité* and *honnêteté* with which he disclosed his secret.[15] Consequently, the *poudre fébrifuge* was validated not only through the patient trials, but also by the first physician's personal assessment of the character of its inventor. Fagon also points out that the *poudre*'s key ingredient, a plant which he does not name, naturally, can be found plentifully throughout the French countryside and can be prepared quite easily:

> Consequently [the *poudre febrifuge*] can be employed at very little expense in all of the hospitals of the king's armies, and without a doubt, it will spare His Majesty from great expenses, and save an infinite number of soldiers by healing them. They will suffer neither from the infection of hospital air nor from the swindling [*friponnerie*] of the entrepreneurs.[16]

To judge from Fagon's assessment, the most important advantages of the drug were the soldiers it would keep in the field and the money it would save the crown. Beyond this, Fagon compares it to a proven febrifuge, cinchona bark; and attests to the good character of its vendor. The details of the trials remain in the background, being guaranteed by the personal credit of the royal first physician as an expert witness.[17]

Interestingly, the initiative for organizing large-scale hospital trials of the *poudre fébrifuge* came not from the army, as Fagon's letter might lead one to expect, but from the navy: specifically, Jérôme Phélypeaux de Pontchartrain (1674-1747), who held the dual post of Secretary of State for the Royal Household and the Navy in the later years of

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[15] "Le Sieur Ferdinand de Guillers nous a declaré fort honestement la preparation et avec une syncerité fort differente de la manière avec laquelle les charlatans s'expliquent sur leurs secrets," AN $V^7$ 246 (6), dossier 3, item 3, Fagon certificate (Janvier 30, 1713), 1v°.

[16] AN $V^7$ 246 (6), dossier 3, item 3, 1v°-2r°.

[17] The role of the first physician as an authoritative witness is comparable to the "gentlemanly truthfulness" described in Steven Shapin, *A Social History of Truth: Civility and Science in Seventeenth-Century England* (Chicago: University of Chicago Press, 1994), chap. 3. It also bears an analogy to the nonmaterial forms of credit which Clare Haru Crowston has recently described as a crucial category of analysis for understanding power and patronage under the Ancien Régime: see Crowston, *Credit, Fashion, Sex: Economies of Regard in Old Regime France* (Durham NC: Duke University Press, 2013).

the reign of Louis XIV.[18] Alongside his many other responsibilities, Pontchartrain kept an eye open for new drugs that might be of use to the French navy. Throughout the opening decade of the eighteenth century, his correspondence shows that he regularly received petitions from vendors hoping to furnish their remedies to the navy. Pontchartrain's subordinates, notably the port intendants, provided him with reports and samples of new remedies that they encountered. He solicited samples of given drugs for testing and sometimes sought the expert medical advice of Fagon on these questions.[19]

It was in fact Fagon who first brought the *poudre fébrifuge* to his attention. On May 16, 1714, Pontchartrain wrote to the first physician concerning a proposal he had received from a certain Sieur Gerauldy, "concerning a remedy which he has invented which he claims cures all varieties of fevers and even serves as a counter-poison," asking for his expert opinion on this remedy.[20] Fagon, however, had a remedy of his own in the "development pipeline"—Guiller's *poudre fébrifuge*—and advised Pontchartrain not to bother with Gerauldy's, as Guiller's was "of a superior quality." This prompted Pontchartrain to request that Fagon send a sample to Beauharnois, Intendant of the Navy at Rochefort, where Gerauldy had likely proposed his remedy. A few weeks later,

[18] On the patronage network of the Phélypeaux and on the career of Jérôme, see Sara E. Chapman, *Private Ambition and Political Alliances: The Phélypeaux de Pontchartrain Family and Louis XIV's Government, 1650-1715* (Rochester, NY: University of Rochester Press, 2004).

[19] Among those mentioned in the naval correspondence (AN MARINE series $B^2$ and $B^3$) during Pontchartrain's term are: a "remede du Sieur Pimont" which Pontchartrain sought for testing; an unguent for curing ulcers; a "poudre des Chartreux," the use of which is unspecified; "tablettes pour le rhume" based on oyster shells; a new hernia remedy; and the root *simarouba*, used for curing dysentery (perhaps a competitor to Helvétius' ipecac).

[20] AN MARINE $B^2$ 238, fol. 128, Pontchartrain to Fagon (May 16, 1714). Gerauldy appears to have produced remedies for several conditions: assuming it is the same Gerauldy, my table of privilege-holders shoes that he received a brevet for his "essences et opiates pour les dents" in 1700, and another for his "antidote theriacal" in 1721.

Pontchartrain received a sample large enough to supply the hospitals of the four Ponant[21] naval arsenals: Rochefort and Brest, each being sent 200 *prises*, and Lorient and Le Havre with 100 *prises* each, along with printed instructions on how and when the *prises* should be taken. Pontchartrain prepared a form letter to the senior officials at each port (Intendants or *ordonnateurs*), asking them to distribute the drugs to the sick of the naval hospitals and then to report back on their efficacy.[22]

Alongside these efforts, Guiller appears to have been personally investigating bulk purchasers for his drug in this period. The next fall (presumably while waiting to hear back concerning the effects of all the trial samples) Guiller received a letter from Boudin, confirming that he had spoken to Pontchartrain on Guiller's behalf and that the drug would be distributed throughout naval hospitals: "I found him very well disposed toward the *poudre*, and he told me that he would send it wherever he could."[23] Boudin cautioned however that much of this would depend upon the diligence of Pontchartrain's *commis*, advising Guiller to follow the matter closely. On top of this he suggested Guiller contact two Jesuits to see if the missions in India might be interested in purchasing a shipment, suggesting that even at this early stage Helvétius was not alone in seeking bulk purchasers other than the state.[24]

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[21] I specify Ponant (Atlantic) ports because no samples for testing appear to have been sent to any of the Levant (Mediterranean) ports, for reasons I have not yet been able to determine. Some hints in the Levant fonds however suggest that they may have drawn more of their drugs from local vendors in Montpellier and Marseille.

[22] AN MARINE $B^2$ 238, fol. 270-271.

[23] "Je l'ay trouvé très disposé en faveur de la poudre, il m'a dit qu'il en envoyoit partout ou il pourroit,"AN $V^7$ 246 (6), dossier 3, item 6, Letter from Boudin to Guiller (November 30, 1714.

[24] Ibid. On proprietary drugs supplied to missionaries, see below, ch. 6, sect. 2. On medicine and the Jesuits in India, see Ines G Županov, *Missionary Tropics: The Catholic Frontier in India, 16th-17th Centuries* (Ann Arbor: University of Michigan Press, 2005), esp. ch. 6.

Three of the port officials acknowledged receipt and passed the samples along to the medical staffs for trials at their respective hospitals.[25] Unfortunately, a detailed report has survived from only one: Charles de Clairambault, *ordonnateur* at Port Louis, the naval base south of Lorient. He forwarded the accounts of the trials undertaken by his surgeon-major, Pierre Labat, and the port physician, Guillaume Boizard (d. 1715).[26] Labat used the powder on a man suffering from a double-tertian; the patient recovered after a single dose, but the fever was already in remission when the dose was administered, and Labat felt that *any* purgative would have cured him at that point. The surgeon-major advised Clairambault that they should wait until the habitual fall and winter fevers arrived in earnest for a more conclusive trial of the drug.[27]

Sure enough, in the middle of the winter of 1714-15, the sailors at Port Louis came down with fevers, as did several non-military patients. The effects of the *poudre fébrifuge*, however, were disappointing. The surgeon-major Labat tried it on "twenty or thirty" patients in the hospital; the port physician, Boizard, wrote that he administered multiple doses to five different patients, some male others female, all outside of the hospital. Labat reported that it produced good effects on one man, aged of thirty years, who had suffered from a quartan fever for eight months: after only two doses he was cured. In the other cases, however, the effect of the drug had been terrible, producing such violent purges that the patients strongly protested. All this in spite of the fact that he had followed the printed instructions to the letter. In some patients the *poudre* seemed to

[25] AN MARINE B$^3$ 222, fol. 214, Clairambault (Lorient), June 27, 1714; and MARINE B$^3$ 220, fol. 286, Champigny (Le Havre), June 27, 1714.

[26] AN MARINE B$^3$ 230, fol. 53r°-54r°, "Mémoire des médecin et chirurgien major de l'hopital de la marine du Port Louis" (January 31 and February 1, 1715). On Labat and Boizard, see Henri François Buffet, *Vie et société au Port-Louis: des origines à Napoléon III* (Rennes: Bahon-Rault, 1972), 371, 375.

[27] AN MARINE B$^3$ 222, fol. 234v, Letter from Clairambault (Lorient), 16 Juillet 1714.

have no effect at all; in others, it provoked vomiting; but in neither case was the fever cured. Labat concluded, "This alleged febrifuge has two important disadvantages: namely, the violence and the uncertainty of its effects."[28]

The terse assessment of the surgeon confirmed that of the physician. In Boizard's report, the defining features of the *poudre* are excessive and violent evacuations, patient protest, and only mixed efficacy against the fever. Boizard observes that after he gave one dose to a woman suffering from a quotidian fever, "The young woman vomited and purged abundantly almost forty times, and the fever left her, but she protested that if presented with the same circumstances she would have preferred to keep the fever than lose it at that price." The other patients included a man suffering from a tertian fever who likewise experienced evacuations from above and below but was not cured; a poor man of whom he lost track; a man suffering from a tertian, to whom he gave three doses, the final of which provoked painful colic but did not cure the fever; and finally a woman who, after a single dose, flatly refused to take any more. But the most interesting part of his report is the theoretical explanation Boizard offers for the failure of the drug: "I conclude that this remedy cannot be a febrifuge neither by its nature nor by the virtue of its substance, but only by the violent evacuations which eject the febrile leaven that occupies the primary [digestive] and even the most internal channels."[29] The so-called *poudre fébrifuge* was not by its nature a true febrifuge, as far as Boizard was concerned:

[28] AN MARINE $B^3$ 230, fol. 53v°.

[29] "Je conclus que ce Remede ne peut estre febrifuge de sa nature ni par la vertu de sa substance, mais seulement par la violence de son evacuation par laquelle il peut faire sortir les levains fievreux qui occupait les premieres voyës et meme les plus interieures," AN MARINE $B^3$ 230, fol. 53v, Mémoire des médecin et chirurgien major (1715).

it was only so accidentally, insofar as it was a powerful purgative that could evacuate the "febrile leaven" from the digestive tract.

I have already discussed the notion of "febrile leaven" as it emerged from the "materialist" reading of Helmontianism present in the acid-alkali theory of pathology.[30] We have seen that this view of disease was particularly widespread in fever theory after the dissemination of Talbor's *Remède Anglois*, and that it was shared by the first physician, Fagon, who used it to explain the "specific" action of cinchona.[31] What is remarkable in this case is that the "chymical criterion" for understanding medicinal specifics appears to have been espoused by both Fagon—who approved the *poudre febrifuge*—and by the port physician Boizard—who categorically rejected it.[32]

When Boizard assessed the effect of the *poudre fébrifuge*, he observed that it was merely a powerful purgative, a type of drug long criticized by Helmontians and other chymical physicians. When purgatives work at all, they do so accidentally by ejecting everything in the stomach and intestines. A truly specific febrifuge would strike in a more targeted way at the root cause of the disease, namely the febrile leaven, or to use Boizard's terms, "by radically extirpating its leaven" (*par l'extirpation radicale de son levain*).[33] Boizard argued that using a violent purgative to get the job done was to cure as the empirics did when they used plants like hellebore: that is, through brute force and by

[30] See above, ch. 2, sects. 2 and 5.

[31] See above, ch. 2, sect. 4; and Guy-Crescent Fagon, "Nouvelles reflections necesaires pour se servir utilement du kinkina," in *Les admirables qualitez du kinkina [...] avec de Nouvelles réflexions pour s'en servir, faites par Monsieur Fagon premier Médecin du Roi en 1697* (Paris: Martin et George Jouvenel, 1705). Fagon declared in 1697 that "there is no remedy more specific against fevers than cinchona," although a few years later he would approve the *poudre fébrifuge* as more effective.

[32] On the "chymical criterion," see above, ch. 2, esp. sect. 5.

[33] AN MARINE $B^3$ 230, fol. 53v°-54r°.

risking the destruction of part of the patient's body.[34] And even then, such methods, like the purges brought on by the *poudre fébrifuge*, were uncertain, and may leave the fever still firmly seated, thus only adding to the patient's misery.

Boizard has unfortunately not left behind any publications that might give us a better idea of his background and training, but the language of his report strongly suggests that he was a chymical physician, as do other details about the medical staffing at Port-Louis. Boizard died only a few months after making his report, in July of 1715, and the *ordonnateur* Clairambault needed to find a replacement. He proposed one Avril Lescot as the new hospital physician:

> His method of work is particular, for he trusts no one but himself, being physician, surgeon, and apothecary at the same time, compounding his own remedies and administering them himself. There seems to be less charlatanry in his practice than in that of other physicians, and as he claims that his remedies have a greater virtue than those of others, there is every likelihood that he would cost the King less because his patients would be better cured, for it is commonly known that physicians and lawyers drag out sickness and lawsuits when they know they will be well paid.[35]

Clairambault met with resistance from Pontchartrain on this question. In his next letter, Clairambault observed that "Those who claim that Sieur Lescot was recommended to me by a writer who dabbles in chymistry are quite ill-informed." He then adds, "As regards the chymical remedies that he himself compounds, and his assurances that similar remedies cannot be acquired from the apothecaries, I believe, Monseigneur, that this can

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[34] Ibid.

[35] "Sa manière de travailler est particuliere car il ne se fie à personne qu'à luy seul etant medecin chirurgien et apotiquaire faisant ses Remedes et les apliquant luy même et il paroist en cela moins de charlatanerie dans sa conduitte que dans celle des autres medecins. Et comme il pretend que ses Remedes ont plus de vertu que les autres il y a aparence qu'il en coutera moins au Roy puisque ses malades seront plûtôt gueris, car on dit ordinairement que les medecins et les procureurs font souvent durer les maladies et les procez quand ils savent qu'ils seront bien payés,"AN MARINE $B^3$ 230, fol. 382r°, Clairambault (Lorient) to Phélypeaux, July 2, 1715.

only be advantageous to the sick, for he has worked for thirty years testing these remedies and must therefore have perfect knowledge of their force and virtue."[36]

Pontchartrain ultimately refused to allow Lescot to be appointed as hospital physician, on the grounds that the holder of the post should be a medical licentiate, and that it was improper for a physician to make and administer his own drugs. Mixing pharmacy and medicine together would give him too much power over patients, Pontchartrain argued, and he may be tempted to test new drugs on patients. This particular concern is especially ironic, given the fact that Pontchartrain had recently ordered a large-scale test of *poudre fébrifuge*, a drug devised by a practitioner who had no more formal medical credentials than Lescot, and had received references from another port intendant, Beauharnois, concerning a febrifuge tested at Rochefort. The implication would seem to be that there were minimal requirements for formal medical training at the naval hospitals, and that anyone wanting to test remedies and sell them to the navy was expected to go through the proper channels at Versailles and personally seek the approval of Fagon and Pontchartrain.[37]

In 1704 Lescot had in fact been condemned in Rennes and Brest as a charlatan. But the way in which Clairambault defends his candidacy is telling: he wanted a practitioner that broke down the traditional boundaries; one with a reputation for famous cures; and one who could produce and administer chymical remedies. The fact that

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[36] "Ceux qui disent Monseigneur que le Sr Lescot m'est recommandé par un écrivain qui se mesle de Chimie sont bien mal-informés. A l'egard des Remedes de Chimie qu'il compose luy même et qu'il assure qu'il ne s'en trouve pas de pareils chez les apotiquaires, je crois Monseigneur que cela ne peut estre qu'avantageux aux malades car puis qu'il y a trente ans qu'il travaille et qu'il a éprouvé ces remedes, il en doit connoitre parfaitement la force et la vertu," Ibid., fols. 395-397r°, August 5, 1715.

[37] On Lescot see Louis Nicolle and Édouard Guéguen, "Comment le charlatan Lescot ne fut pas nommé médecin de l'hôpital de la Marine royale au Port-Louis," *Revue d'histoire de la pharmacie* 57, no. 201 (1969): 335–37. These minimal requirements were likely the result of the 1707 Edict of Marly, which mandated that any physician needed to be able to prove his credentials to local civil magistrates.

Clairambault wanted a figure like Lescot to succeed Boizard as hospital physician strongly suggests that the latter was not a conventional Galenic physician. These details, coupled with Boizard's assessment of the drug, may place him among a new school of practitioners seeking medicinal substances which would work against specific diseases in large populations. As Harold J. Cook has suggested, this kind of practitioner found a special niche in the growing militaries of Western Europe.[38]

Like Helvétius' justification of his dysentery specific, Boizard's assessment of the *poudre fébrifuge* demonstrates that cinchona had emerged as an obligatory point of reference for anyone wishing to tout or assess a substance as a medical specific. Daubenton's story of the first trial ends with the drug being found wanting in comparison to the proven effectiveness of cinchona. Fagon's certificate following the second trial insists that the *poudre fébrifuge* succeeded on patients where even cinchona had failed. In the report of the third trial at Port Louis the physician Boizard explains the failure of the drug in the language of the acid-alkali theory, then closely associated with explaining the therapeutic action of cinchona. Seventeenth-century Europeans had of course shown great interest in American plants like cinchona, but Fagon's endorsement of the *poudre fébrifuge* exemplifies another trend: a broader interest in finding cheaper indigenous European alternatives to exotic plants, which could be expensive or otherwise difficult to obtain.[39]

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[38] Harold J. Cook, "Practical Medicine and the British Armed Forces after the 'Glorious Revolution,'" *Medical History* 34, no. 1 (1990): 1–26.

[39] Kapil Raj has pointed to this tendency in Antoine de Jussieu (1686-1758), member of the Academy of Sciences and professor of botany at the Jardin du Roi: see *Relocating Modern Science: Circulation and the Construction of Knowledge in South Asia and Europe, 1650-1900* (Houndmills: Palgrave Macmillan, 2007), esp. 55–56; for earlier examples, see Alix Cooper, *Inventing the Indigenous: Local Knowledge and Natural History in Early Modern Europe* (Cambridge: Cambridge University Press, 2007).

The exchanges surrounding Guiller's *poudre fébrifuge* circa 1713-1714 also exemplify the same convergence of entrepreneurial, medical, and military interests as Helvétius' dysentery specific. The trials of both drugs were spurred on by the medical needs of the growing armies and navies of the period, and like other logistical problems, these needs were met by private military contractors. In the final decades of Louis XIV's reign, the highest levels of the fiscal-military state—personified here by Pontchartrain, and in the case of Helvétius by Seignelay—had taken an interest in prospecting and testing drugs for use in the field, particularly those responding to the perennial health problems of crowded military hospitals, namely dysentery and fevers.

These population-scale needs seem, at first glance, to be at odds with the relatively small scale of drug testing. Like Helvétius' dysentery specific, Guiller's *poudre fébrifuge* was initially tested on relatively small groups, and generated little in the way of systematic records. In the case of the *poudre fébrifuge*, we have no details at all surrounding the first trial, beyond the fact that it was supervised by Fagon who deemed the drug ineffective. Guiller attributed this result to the drug's spoilage en route during its transport from Venice. He was careful to transport it himself the next time around, and was personally present during the trial. With Fagon's second trial in 1713 we hear only of the drug's success on "several" patients, including some cases where even cinchona had not been effective. Finally, with the large military hospital trials arranged by Pontchartrain in 1714, hundreds of *prises* were sent for testing. We know that in the case of the surgeon Labat, the drug was given to "twenty or thirty" patients, but the single instance where it was deemed successful is the only one described at any length. In the case of Boizard, a more detailed patient-by-patient report survives for the five patients to

whom he administered it. Two of these patients were women (far from the population Pontchartrain and Fagon envisioned for the trial), and more space is devoted to his pharmacological commentary than to the details of the patient case histories.

Despite the criticisms of Boizard at Port Louis, it should be noted that theirs was only one of four ports where the drug was sent for testing. At least one physician, the famous Jean Cochon-Dupuy (1674-1757), correspondent of the *Académie royale des sciences* and port physician at Rochefort, endorsed the drug following his own trials, though his report has, unfortunately, not survived for comparison. We do however know that the Rochefort intendant requested a new shipment.[40] In all of these cases, the expert judgment of the practitioner was the paramount criterion, independent of the exact number of patients on whom the drug was tested, which could range from "several" to "twenty or thirty."

Whatever the results from the other port trials, perhaps the most interesting thing to note about this stage in the saga of Guiller's *poudre fébrifuge* is that the drug was granted a royal privilege which explicitly underlined military applications, *even before* extensive military hospital trials were undertaken. The successful trials undertaken personally by the royal first physician at a *civilian* hospital provided the basis for granting a privilege that was explicitly earmarked for *military* purposes.

2. *Lajutais and Guerin's scheme to recover Guiller's privilege, 1732-1733*

Guiller retired to the town of Mondragon in Provence, comfortably pensioned, knighted, and privileged with a monopoly for the sale of his drug throughout the kingdom. The extent to which he profited by his privilege is unclear: in contrast to the

[40] ANM SRM 111 d 29, "Mémoire des Demoiselles Lajutais," 7.

case of Helvétius, I have not been able to find receipts for bulk purchases by the navy or army, nor is there any evidence that he set up *bureaux* for its sale throughout France.[41] On July 1, 1729, he did, however, collect an attestation from the provincial intendant's subdelegate and the town consul of Mondragon, who testified not only to the efficacy of the *poudre fébrifuge* but also to the importance of its charitable distribution to the local poor.[42] This attestation was intended to support the renewal of Guiller's privilege when the new 1728 *commission* requested all existing brevets be submitted for reexamination. Before he was able to forward it on to the commission, Guiller died in Mondragon on August 18, 1729, followed six months later by his wife, Marie-Victoire.[43]

A little less than two years after Guiller's death, two men initiated a partnership to renew his privilege for the *poudre fébrifuge* and market it themselves. These two men, Pierre Brodin de Lajutais and Etienne Guerin, had worked together as administrators at the snuff manufactory in Mondragon. The sale of tobacco in France in this period was a legal monopoly, which had recently passed from the hands of the East Indies Company to the *Fermiers généraux*, the private firm which collected taxes and duties on behalf of the French crown.[44] Lajutais and Guerin were members of a class of bureaucrats who

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[41] Guerin in fact suggests that Guiller did not work very hard to commercialize the *poudre febrifuge*, concluding that he was not sufficiently motivated: his generous royal pension was more than sufficient for his needs and he lacked an heir: "Je connois bien aujourd'huy la negligence aujourd'huy la negligence de Mr Le Chevalier de Guiller, la pension que le Roy lui avoit accordé, et se voyant sans enfans, ces raisons l'excusent de n'avoir pas mieux tiré party d'un pareil remede," AN $V^7$ 246 (6), dossier 1 item 5, Guerin to Lajutais (August 7, 1732).

[42] AN $V^7$ 246 (6), dossier 1, no. 30, Attestation from Durand and Augier, July 1, 1729.

[43] AD Vaucluse GG $11^2$, Mondragon, Baptêmes, mariages, sépultures, fol. 552v°, 714v°.

[44] On the tobacco monopoly, see the classic work of Jacob M. Price, *France and the Chesapeake; a History of the French Tobacco Monopoly, 1674-1791, and of Its Relationship to the British and American Tobacco Trades* (Ann Arbor: University of Michigan Press, 1973); Michael Kwass, "Court Capitalism, Illicit Markets, and Political Legitimacy in Eighteenth-Century France: The Salt and Tobacco Monopolies," in *Questioning Credible Commitment: Perspectives on the Rise of Financial Capitalism*, ed. D'Maris Coffman, Adrian Leonard, and Larry Neal (Cambridge: Cambridge University Press, 2013), 228–50.

benefited from the farming out of government functions by the early modern state, which some scholars have called "court capitalism."[45] The fact that both men were involved with the tobacco monopoly bears emphasis here. Their place in the world of court capitalism, however minor, likely provided them with the incentive and connections that led them to see the *poudre fébrifuge* as an exploitable asset. Together they would use it to secure a "farmed-out" operation of their own as medical contractors to the French army. Guerin had also served with his father as an *entrepreneur* (contractor) in charge of erecting fortifications, and therefore had some experience in military contracting.[46] Likewise, the familiarity of both men with the processing and grinding of tobacco may also have come in handy in the extensive plant processing operation needed to meet bulk pharmaceutical orders.

When the Mondragon manufactory was closed in 1731, the older and higher-ranking Lajutais was transferred to another manufactory in Arles, while Guerin was obliged to make his way up to Versailles to solicit a new posting from the *Fermiers généraux*.[47] Lajutais had evidently forged close personal ties to Guiller just before he

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[45] The term was first coined by George V. Taylor and expanded more recently by Gail Bossenga, "Markets, the Patrimonial State, and the Origins of the French Revolution," *1650-1850: Ideas, Aesthetics, and Inquiries in the Early Modern Era* 11 (2005): 443–510; George V. Taylor, "Types of Capitalism in Eighteenth-Century France," *The English Historical Review* 79, no. 312 (1964): 478–97.

[46] AN $V^7$ 246, (6), dossier 3, Item 12, Guerin to Fontanieu, Intendant of Dauphiné, October 10, 1733.

[47] The reason for the closure of the Mondragon snuff works is unclear. Along with Paris, it was one of only two sites where snuff was ground (the more common form of tobacco being in rolls): see Price, *France and the Chesapeake*, 42, 116. The closure may be tied to the passage of the tobacco monopoly from the East Indies Company to the *Fermiers*, but there are also other possibilities: Mondragon was in the Principauté d'Orange, which has the peculiar distinction of being a French enclave within the papal enclave of the Comtat Venaissin. The closure could be tied to economic conflicts in 1730s between France and the papacy, with France requesting that the Comtat close down tobacco plantations and extradite French *contrabandiers*. Mondragon's proximity to tobacco plantations in the Comtat may have allowed it to serve as a cover for tobacco smuggling between the papal enclave and France. See René Moulinas, "Problèmes d'une enclave dans la France d'Ancien Régime : culture, commerce et contrebande du tabac dans le Comtat Venaissin et à Avignon au début du XVIIIe siècle," *Provence historique* 17 (1967): 3–31; Pierre Léon, "Un

died: he had married Guiller's stepdaughter, claimed to have been taken under his wing, and claimed to possess his "livre bleue," possibly a book of medical secrets. Lajutais would later leverage his close relationship with Guiller to evidence his legitimacy as inheritor of the *poudre fébrifuge*. This claim provided the initial impetus for his partnership with Guerin, who, for his part, served as Lajutais' agent on the ground at Versailles, making all the necessary inquiries to renew the privilege and, equally important, to recover the medical secret it protected, which Guiller had taken with him to the grave.

Guerin was apparently much younger than Lajutais and better suited to the social world of Versailles. His skills in navigating both the world of the royal court and the central government bureaucracy would prove crucial for his and Lajutais' plans. From June 1732 to November 1733, he lived in Paris and frequently commuted to the court at Versailles, pursuing his own interests with the *fermiers* and following leads on the *poudre fébrifuge*. He also regularly corresponded with Lajutais, who was based in the Provençal town of Arles, to keep him apprised of his progress. Guerin's side of this correspondence has survived, and describes his actions in great detail. After having little success in securing a new position for himself from the *fermiers*, on June 21, 1732, Guerin eagerly accepted Lajutais' proposal to collaborate on recovering both the privilege and the medical secret of the *poudre fébrifuge*.

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épisode de la mainmise de la France sur le Comtat Venaissin : la guerre économique franco-comtadine 1730-1734," in *Actes du 77e congrès national des sociétés savantes, Grenoble, 1952* (Paris: Imprimerie nationale, 1952), 349–60. Finally, there may also have been problems with the leaf from local plantations: according to Price, it was found to be "vile and unsaleable" around 1700. The subfarmers at Mondragon were forced to buy it due to the active influence of local cultivators with the intendant of Provence. See Price, *France and the Chesapeake*, 152-153.

Lajutais quite sensibly suggested that Guiller begin his investigations at the Jardin du Roi. In addition to being the foremost site of botanical knowledge in the kingdom, the Jardin was, according to Lajutais, the location where Guiller had held a public demonstrations of the drug in the final year of Louis XIV's reign.[48] Guerin explained that he had already visited the Jardin twice, but was unable to find anyone who could answer his question and so suggested that Lajutais send him one of Guiller's printed *mémoires* on the drug's virtues to assist him in his inquiry. As if to whet Lajutais' appetite, Guerin also added that he had had the pleasure of meeting the royal first physician, François Chicoyneau (1672-1752), during a recent *fête* at Versailles, and that the latter had offered his protection.[49]

By July 12, Lajutais had mailed Guerin copies of Fagon's attestation and Guiller's 1713 brevet. Guerin wrote back immediately telling him that he would need originals, not copies, if he was to pursue the matter any further.[50] These finally arrived on August 2,[51] by which point Guerin's visits to the Jardin du Roi had also yielded fruit: the *plante fébrifuge*, he believed, was a species of tithymal (*titimale*; modern spurge, the *euphorbia* genus), specifically *tithimalus amigdaloïdes*, so called for its almond taste (more on the plant in the following section).[52] With the identity of the plant apparently recovered, and with the original 1713 brevet and attestation in hand, Guerin managed to secure an audience with the first physician Chicoyneau, confident that the whole matter could be settled then and there.

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[48] AN V$^7$ 246 (6), dossier 1, item 28, Memoire Pour le Sieur Guerin Contre le sieur Brodin de Lajtuais.

[49] AN V$^7$ 246 (6), dossier 1, item 1, Guerin to Lajutais (June 21, 1732).

[50] Ibid., item 2, Guerin to Lajutais (July 12, 1732).

[51] Ibid., item 3, Guerin to Lajutais (August 2, 1732).

[52] Modern *euphorbia* genus, or spurge in English. Throughout I use the now archaic *tithymal*, keeping with the terminology of the times.

He was mistaken. Chicoyneau carefully examined the documents and found them satisfactory, but explained that they were not in themselves sufficient to renew the privilege. Samples of the drug would still need to be examined by the new secret remedies commission, formed in 1731 by his immediate predecessor as first physician, Pierre Chirac (1650-1732).[53] Guerin was taken aback, and reports that he directly quoted the portion of Fagon's attestation that distinguished Guiller's moral character, from that of "common charlatans":

> I had the honor of representing to him that Monsieur Fagon had not at all treated Monsieur de Guiller in this way, and that he had contented himself "with what Sieur Ferdinand de Guiller had quite honestly declared, with a sincerity very different from the way that charlatans explain their secrets," and that by my account you were ready to do the same.[54]

Guerin was implying that just as Guiller had been an *honnête homme* with an honest remedy, so too were he and Lajutais. Why was an examination by a full commission necessary when in the past the simple judgement of the first physician had sufficed?

But Chicoyneau was firm on this point. The days when the personal authority of the first physician had sufficed to approve a drug had passed, and the matter would need to go before the commission. The first physician explained that they would also need to personally communicate the preparation of the drug to him, and Guerin reports with some surprise that Chicoyneau had already inferred that tithymal was the main ingredient of the drug. This alone was no medical secret: the key to the drug's success, he observed, was in the preparation.

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[53] See above, ch. 1.

[54] "J'ay eû l'honneur de lui représenter que Mr Fagon n'en avoit point usé ainsy avec Mr de Guiller, mais qu'il s'estoit contente que le Sr Ferdinand de Guiller avoit déclaré fort honnêtement, et avec une sincérité fort différente de la manière avec laquelle les charlatans s'expliquent sur leurs secrets, et que vous estiés en estat de le faire de mesme sur ma représentation," AN $V^7$ 246, (6), dossier 1, piece 4, Guerin to Lajutais, (August 3, 1732).

Guerin reported all of this to Lajutais and implored him to send the secret of the preparation to him in a letter sealed with Guiller's own mark, which he would then personally and "very religiously" forward on to Chicoyneau, ensuring that no one else would see it. Guerin even wrote a draft cover letter for Lajutais to recopy in his own hand, explaining their project and beseeching that Chicoyneau honour them with the same favour that Fagon did Guiller.

The progress of the enterprise slowed to a crawl in the following months. Lajutais had inherited the recipe for how to prepare the *plante fébrifuge* but was leery about sending the secret through the mail, worrying that he might be swindled. Requests for a sealed letter detailing the preparation became a persistent refrain in Guerin's letters. As the months wore on, he would underline again and again, in an increasingly frustrated tone, "It is necessary for you to send me the tithymal recipe as the chevalier de Guiller relates it in his blue book, if all my efforts here are to succeed."[55] To add further urgency, Guerin claimed that a meeting of the secret remedies commission was imminent, and that the commission did not meet very frequently, so they might miss their chance to get the drug approved.

Guerin did his best to assuage Lajutais' concerns. He instructed him on how to securely send a letter through the French postal system and explained why it was best to use him personally as an intermediary rather than to the first physician directly:

[55] "Il estoit necessaire pour faire reussir toutes mes opperations de m'envoyer la preparation du tithimalle de la manière que le chevalier de Guiller le raporte dans son livre bleu," AN $V^7$ 246, (6), dossier 1, piece 8, Guerin to Lajutais (November 3, 1732). The book of secrets is also mentioned during a later interrogation session with Lajutais, in which the *commissionnaire* Le Roux (drawing, it should be noted, on questions furnished by Guerin himself), asks him "s'il n'est pas vray que le sieur de la Jutais a dit au Sr Guerin qu'il avoit lui le livre des secrets du S. Guiller mais que ce livre n'apprenoit point le nom de la plante febrifuge et que cela le mortiffioit beaucoup." In order to discredit Guerin's claims, Lajutais of course denies ever having been uncertain about the name of the plant. See AN $V^7$ 246, (6), cotte 2e, 1738 Interrogatoire, 4r°.

Chicoyneau was so busy constantly attending to the king that he might leave the recipe unattended in his study, and the curious fellow phycians whom he often received in his chambers might discover it in his absence, and learn the secret.[56] The safest way to prevent the letter from being intercepted or neglected by the busy first physician (and thus left open to prying eyes) was to have Guerin deliver it personally to Chicoyneau, or so Guerin claimed. Lajutais was also afraid that the first physician himself might steal his secret and profit by it, a concern which Guerin dismissed as pure folly: "When Chicoyneau asks you for this preparation, I assure you it is not out of some desire he has to know it, but rather because it is wise and prudent for the king's first physician to grant a permission only after having been informed of how the remedy is compounded."[57]

By December 30, Lajutais was still unconvinced, so Guerin reported to him that a pair of vendors, Rivot Mancini and one Giambacorta, *opérateur*, attached to the house of Her Supreme Highness the Archduchess,[58] had just made a trial before Chicoyneau of a secret remedy called the "baume ou huile de filosophe," and had come to court to obtain

[56] "Mr Chicoyneau qui est continüellement auprès du Roi qu'à peine peut-on lui parler, negligeroit pas peut-estre votre preparation et de repondre à vostre lettre. Nombre de medecins qui sont continuellement soit dans sa chambre ou à son cabinet pourroient malgré eux s'en instruire," AN $V^7$ 246 (6), dossier 1, piece 7, Guerin to Lajutais (October 5, 1732). To reinforce his point about papers at court never being entirely private, Guerin tells Lajutais a tale of court intrigue from the time of the Cardinal de Richelieu. The Cardinal had been meeting with a good friend in his *cabinet* (office), and left him alone there for a few minutes while he greeted an important female visitor who had come to his door; upon returning, the cardinal realized that he had left some of his papers out and open to prying eyes. Although he could of course not be sure that his friend had read any of them, he nonetheless called the captain of the guard and had the man arrested and sent him to the Bastille, ordering the guard to ensure he spoke to no one. Two years later, when he was finally released from his imprisonment, the friend returned to the Cardinal and asked him why he had been so suddenly and harshly imprisoned. The latter replied, that, considering the circumstances, "il auroit mieux voulu pour lors qu'il eut esté son ennemi que son ami." Thus it is the world of *les grands*, or so Guerin, passing himself as a seasoned courtier, tells his provincial friend Lajutais.

[57] "Quand il [Chicoyneau] vous demande cette preparation, ce n'est pas je vous assure par l'envie qu'il a de la scavoir, mais par ce qu'il est de sage et de regle que quand le premier medecin du Roi accorde quelqu'un permission il faut qu'il soit informé de la maniere que les remedes sont composés," AN $V^7$ 246, (6), dossier 1, piece 7, Guerin to Lajutais (October 5, 1732).

[58] Probably Elisabeth Christine, Archduchess of Austria and wife of the Habsburg Emperor Charles VI.

their privilege. The pair had paid fifty *louis d'or* to an unnamed person—with whom Guerin assures Lajutais he is acquainted—in order to expedite the issue of the brevet. The implication was that if Lajutais were more cooperative, Guerin could secure the same deal for him.[59] Still Lajutais would not budge. Trade secrecy, it would seem, was a double edged sword. Guiller's death before transmitting the identity of the *plante fébrifuge* to his posterity had already posed a challenge to renewing the privilege, and now Lajutais' fears that the secret of its preparation would be stolen out from under him was, from Guerin's perspective, on the verge of ruining their whole enterprise.

The project of recovering the privilege for the *poudre fébrifuge* might have ended there, but instead an unexpected turn of events gave it new life: just as Guerin's hopes for a new position form the *fermiers* were once again dashed,[60] Chicoyneau opened a new session of the secret remedies commission and, even more importantly, France began to mobilize for war.[61] This was the military buildup following the death of the Polish king, Augustus II, in which the French, under the leadership of the Cardinal Fleury, were preparing to intervene against the Austrian Habsburgs in order to support their candidate for the Polish succession, Stanislaw Leszczyński, and to check Habsburg power in central Europe. A few months later, this would eventually lead to the War of Polish Succession, when Louis XV declared war on Austria and Saxony on October 10, 1733.[62]

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[59] AN $V^7$ 246, (6), dossier 1, piece 10, Guerin to Lajutais (December 30, 1732).

[60] Guerin was apparently embarrassed before the Controller General of Finances when he applied for an unspecified position in Dunkerque: Lajutais had given him insider information suggesting that the current occupant of the position, the elderly Mr Gassin, was on point of death, but Gassin unexpectedly recovered, and Guerin's eagerness to replace him seems not to have been appreciated.

[61] AN $V^7$ 246 (6), dossier 1, piece 15, Guerin to Lajutais (July 25, 1733).

[62] Thérèse Charmasson, Anne-Marie Lelorrain, and Martine Sonnet, *Chronologie de l'histoire de France* (Paris: Presses universitaires de France, 1994), 412; John L. Sutton, *The King's Honor and the King's Cardinal: The War of the Polish Succession* (Lexington: University Press of Kentucky, 1980).

Guerin and Lajutais initially had no greater ambitions than to retail the *poudre fébrifuge* through a network of franchise vendors. Now their project to renew the privilege became intimately tied to securing a medical supply contract with the army. From this point on (August 5, 1733) Guerin's letters are supplemented by a series of expense claims he later presented to Lajutais and which allow his movements to be followed in astonishing detail. From August 1733 to August 1734 alone, he made no less than forty-five trips to Versailles, six to the royal palace at Marly, and had spent fifty-five days renting a room in Fontainebleau. Beyond his meetings with Chicoyneau, these visits were dotted with numerous other items, including expensive dinners he hosted for "persons whom he had to ingratiate with for the success of their plans,"[63] the tobacco and other "gifts" he provided to various administrators in the *Bureau de guerre*, gratuities for a potential investor, the costs of securing a copy of Guiller's earlier brevet from the dispatch registry of the Secretary of State for the Royal Household, and payments to the *écrivains* who produced the neatly-written petitions (*placets* and *mémoires*) to supply the *poudre* to the army. In total, Guerin records having spent over 631 *livres* on these items alone.[64]

Here it should be acknowledged that Guerin's ledgers were deposited as evidence in his favour during his lawsuit against Lajutais, and he may have exaggerated his expenses in order to secure more money from his former business partner. They nonetheless provide an index of the precariousness of soliciting privileges and contracts

[63] "…personnes qu'il faloit affectioner pour la reussite des vües du rendant [Guerin] et de son associé [Lajutais]," AN $V^7$ 246 (6), Compte de recette et dépense que rend le S. Guerin au S. de Lajutais son associé a compter depuis le 5 aoust 1733 jusqu'à cejourdhuy, 11r°. Guerin priced his return trips to Versailles at 6 *livres* 10 *sols* per trip.

[64] Ibid., ch. 1, 7v°-9v°.

at court. Guerin constantly needed to remain at court to counter the malicious rumours of the project's adversaries. He also had to ensure that the *commis* were forwarding his *mémoires* and *placets* on for consideration by the proper officials. Later, he had to wait for days to be personally summoned by Dangervilliers, Secretary of War, and remain on-hand to receive the order for a shipment of the *poudre* that would come down from the *Bureau de guerre*.[65]

In spite of these challenges, Guerin's reports back to Lajutais show that matters seemed well in hand by the fall of 1733. On September 11, Guerin informed Lajutais that he had just spent two hours with Chicoyneau in the latter's office and that the secret remedies commission was going to discuss their proposal the following Tuesday. Further, he had prepared a *mémoire* for Cardinal Fleury—then *de facto* prime minister of France—on the potential utility of the *poudre fébriuge* in the army, which Chicoyneau had read over before hand and approved. At this stage, the first physician emerges as a full collaborator in Guerin and Lajutais' enterprise: in his letters Guerin even mentions having dinner with him, and being acquainted with his wife. Chicoyneau also drew benefits from his clients: in one letter Guerin asks Lajutais to select six pounds of the very best Spanish tobacco from the Arles manufactory, to be sent as a gift for the first physician. Gift-giving also extended to important government bureaucrats: Guerin also asks for an additional pound or two of tobacco for his friend Chaila, a *commis* in the

[65] For example: "Fait dépense de la somme de quarante cinq livres pour quarante cinq jours le loyer de chambre à Fontainebleau afin d'estre à portée de recevoir les ordres du ministre, entretenir la bonne idée qu'il avoit donné de la poudre et combattre les opinions des personnes qui tachoient de la decrier ainsy qu'il peut se justifier," AN $V^7$ 246 (6), "Compte de recette et dépense que rend le S. Guerin au S. de Lajutais,"11r°-v°.

*Bureau de guerre*.[66] Lajutais' privileged position in Arles made gifts of tobacco, which was heavily taxed in this period, the ideal grease for the wheels of power in Versailles.

A few days later, on September 19, after yet another delay—Chicoyneau had been detained in Versailles to treat the Spanish ambassador—Guerin reported that the *poudre fébrifuge* had at last been brought before the commission, where it was met with vigorous opposition:

> Yesterday, my dear sir, I obliged Monsieur the king's first physician to come to Paris concerning our business. You could hardly imagine how much all the physicians, surgeons, and apothecaries opposed it, once he presented it to the assembly. Some claimed that as the royal privilege had expired, you could not be accorded another; others said that the King had bought the secret from Monsieur de Guiller. In the end they were all opposed and only Monsieur the first physician stands fast for us. I am here [in Versailles] on his heels to obtain what we seek, and I am vehemently rebutting all of these devils of physicians, surgeons, and apothecaries, and am proving to the court that what they advance is false and inappropriate. They claim they know how to prepare the *poudre fébrifuge*; I have challenged them in the presence of the royal first physician. I will not leave the court until this affair is settled, one way or another.[67]

Chicoyneau stood by their project, and his personal support was sufficient for them to move ahead. Despite the opposition of "powerful adversaries" on the commission, Guerin reported that they had begun trials of the drug on October 11, 1733. As in the case of Guiller in 1713, the trials were performed on an indefinite number of hospital patients and were directly supervised by the first physician, in this case at the Charité hospital in

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[66] AN $V^7$ 246, (6), dossier 2, piece B, Guerin to Lajutais (11 September 1733).

[67] "J'ai obligé hier, mon cher Monsieur, Mr le premier medecin du Roi de se rendre à Paris au sujet de nostre affaire. Vous ne scauries encore, lors qu'il la préposa a l'assemblée, combien tous les medecins chirurgiens apothicaires se sont opposés, les uns dit [sic] qu'attendu que le privilege du Roi etant expiré, il n'y avoit pas lieu de vous en accorder un autre; les autres disent que le Roi a payé ce secret a Mr de Guiller. Enfin ils s'y sont tout opposés et il y a que Mr le premier medecin qui tient encore bon pour nous. Je suis icy a ses trousses pour obtenir ce que nous desiront et je repond vivement a tous ces Diables de medecins chirurgiens et apoticaires et je prouve à la cour qu'ils avencent faux et mal apropos, [ils] disent qu'ils scavent la manière de preparer la poudre de febrifuge; je leur en ai faict defi en presence de Mr le premier medecin du Roi je ne quitte point la cour que je n'aye fini d'une manière ou d'autre cette affaire," AN $V^7$ 246, (6), dossier 1, piece 16, Guerin to Lajutais (September 19, 1733).

Avon, near Fontainebleau.[68] If the trials were successful, he was convinced that Chicoyneau's favourable report to the king would secure them the privilege—although he also asked Lajutais to immediately mail him the not inconsiderable sum of five or six *louis d'or*, as he was running out of money and would need to make "certain indispensable liberalities" toward those who had helped him so far, namely Chaila, administrator at the *Bureau de Guerre*. Tellingly, he also added, "La guerre est tout de bon à present," implying once again that these developments were closely tied to the mobilisation then occurring.[69]

Chicoyneau's personal attestations to the drug's effectiveness overcame the resistance of their "powerful adversaries" in the commission. The royal brevet—which was granted in Lajutais' name alone—was signed by Louis XV at a meeting of the Council of State on November 17, 1733.[70] Guerin and Lajutais had finally secured the privilege, but soon learned they had lost their bid for the military contract. The lack of surviving correspondence after this point prevents us from knowing exactly what happened, but it seems that they first aimed to supply their drugs to the Army of Italy through a third party named Jean Giraud, the contractor (*entrepreneur*) charged with running the campaign hospitals.[71] Giraud's bid lost, and the hospital contract went instead to one d'Articulle (or Darthicule), based in Turin, who planned to supply his own medications.[72] Guerin and Lajutais requested that the king order the entrepreneur to use their medications, which, they claimed, could more surely cure a fever in three doses than

[68] No records survive in AD Seine-et-Marne, series H.
[69] AN $V^7$ 246, (6), dossier 1, piece 18, Guerin to Lajutais (October 11, 1733).
[70] AN $O^1$ 77, fol. 287-289.
[71] AN $V^7$ 246, (6), dossier 3, item 13, Draft proposal to Cardinal Fleury (s.d.).
[72] Ibid., item 11, Fontanieu, intendant of Dauphiné, to Guerin (October 18, 1733).

cinchona could in fifty.[73] They then made their own attempt to underbid d'Articulle, proposing to undertake the whole hospital contract themselves.[74] This attempt was rebuffed by the War Secretary, but this would prove to be but a temporary setback. Although they had lost the chance to supply the *poudre fébrifuge* to the army of Italy, Guerin would spend most of 1734 on a second round of contract bidding, chasing the court from chateau to chateau and bribing administrators in order to supply the drug to the military hospitals of Alsace. He was ultimately successful, and he and Lajutais were amply rewarded for all their efforts in 1735, as we shall see below.

The dramatic progress Guerin made with both Chicoyneau and the *Bureau de guerre* was no doubt tied to the immediate military needs to which the *poudre fébrifuge* responded during the mobilization for the War of the Polish Succession. But a crucial question remains: how had Guerin overcome Lajtutais' previous reluctance to send him the recipe for the drug? The surviving letters are mute on this question, but the answer, at least as Guerin would later claim, is that he in fact had not: Guerin simply invented a new preparation of his own, and submitted it to the commission and to Chicoyneau for bedside trials. As Guerin tells it, Lajutais' name was the one on the brevet because of his link to Guiller, but his secrecy concerning the preparation had forced Guerin to devise a preparation of his own. This begs the question: was this *poudre fébrifuge* still the same drug as the one that Guiller had devised in 1713? How was it prepared? And more fundamentally, was Guerin in fact correct in his identification of *tithymalus amigdaloides*

[73] Ibid., item 16, Mémoire (s.d.).

[74] Ibid., item 14, untitled draft proposal beginning "Il y a actuellement a la cour plusieurs compagnies qui travailles a avoir l'entreprise des hospiteaux de l'armée d'Italie," (October 18, 1733).

as Guiller's elusive *plante fébrifuge*? It is to these questions that I will turn in the following section.

3. *Re-discovering the* plante fébrifuge *and the secret of its preparation*

A little over thirty years after Guerin and Lajutais' efforts, Gabriel François Venel (1735-1775), professor of materia medica at Montpellier, described tithymal-based remedies in his 1765 article on "Titimale ou Tithymale" in the *Encyclopédie*:

> Pharmacologists have made a great many species of tithymal in the list of remedies. All of these species possess the same medicinal properties. Principally their seeds and roots have been employed for internal uses. The seeds, which are swallowed whole, and the roots, which are dried and made into a powder, are very violent purgatives, which physicians hardly prescribe anymore […] The powder of tithymal root is nothing but a charlatan's remedy, and the seeds are a remedy used by peasants, and they succeed only among the most vigorous [of patients].[75]

As far as Venel was concerned, all species of tithymal had the same basic properties, most importantly a caustic milky latex (*suc laiteux*). Pharmacologically speaking they were nothing but violent purgatives, as is implied by "spurge," the modern English name of the genus. His condemnation of the medicinal use of plants in the tithymal family bears a more-than-passing resemblance to that of Boizard regarding Guiller's *poudre fébrifuge* fifty years earlier: a violent purgative, appropriate only for the strongest of patients, and associated to charlatans. Venel makes no mention its possible use as a febrifuge in his article.

[75] "Les pharmacologistes ont fait encore beaucoup d'especes de titimales dans la liste des remedes; toutes ces especes possedent les mêmes propriétés médicinales. On a principalement employé leurs semences et leur racine pour l'usage intérieur. Les semences avalées entieres et les racines séchées et mises en poudre sont des purgatifs très-violens que les médecins n'ordonnent presque plus […]. La poudre de racine de titimale n'est plus qu'un remede de charlatan, et les semences un remede de paysan, qui ne réussit même que chez les plus vigoureux," "Titimale ou Tithymale," *Encyclopédie*, vol. 16, 357-358.

Understandings of tithymal were very different earlier in the century. Even thirty years earlier, the supposed interchangeability of all species of tithymal was not yet an accepted fact, and the applicability of at least one species to cure fevers is acknowledged in the *materia medica* treatises of two prominent Academicians and professors at the Jardin du Roi, namely Joseph Pitton de Tournefort (1656-1708), professor of botany, and the apothecary Étienne-François Geoffroy (1672-1731), professor of chymistry. Indeed, the initial crux of the problem of the *poudre fébrifuge* for Guerin and Lajutais was that there were so many different species of tithymal and they were not sure they had the right one. When Guerin informed him of the name of the plant, *tithymalus amigdaloïdes* and mailed him a sample of it, Lajutais heartily thanked him and added "I had always believed that it was tithymal, but I could never figure out what species it was, as there are many varieties."[76] Indeed, Tournefort had enumerated sixty-three species of tithymal in his 1700 *Institutiones rei herbariae*.[77] But already in October of 1732, it seems that Lajutais began to worry that they had the wrong one: he prepared *tithymalus amigdaloïdes* following Guiller's recipe but found it to be different from the powder Guerin had succeeded in producing in Paris in both its color (he does not specify which colour it is or should be) and its effect (he reported that when he chewed on it his throat became inflamed). He became worried that Guerin was providing Chicoyneau with a powder different from that of Guiller's and that by telling Chicoyneau that it was the same, Guerin might leave the first physician with the impression that he was a cheat (*un*

[76] "J'avois toujours bien crû que c'étoit un titimale, mais je n'avois jamais pu sçavoir de quelle espece il etoit, car il y a de plusieurs sortes," Lajutais to Guerin (August 11, 1732), quoted in AN $V^7$ 246, (6), dossier 1, item 28, *Mémoire pour le sieur Guerin*, 2.

[77] Joseph Pitton de Tournefort, *Institutiones rei herbariæ*, ed. Antoine de Jussieu, 3rd ed. (Paris: Imprimerie royale, 1719), 1:85–88.

*fourbe*).[78] For his part Guerin pointed out that Fagon's original attestation had suggested the plant needed to be harvested at a specific time of the year (summer): perhaps Lajutais had harvested it in the wrong season, or Guerin had the wrong preparation.[79] Worse still, it was possible that Guerin had incorrectly identified the plant. In any case, the question was moot because as we have seen Lajutais was completely unwilling to send Guerin the recipe from Guiller's book of secrets.

We have already seen that in spite of his partner's distrust, Guerin continued to pursue their common enterprise, finally securing the royal privilege in Lajutais' name on November 17, 1733. When they came to blows before the commissioners of the Conseil privé a few years later, however, Guerin revealed that Lajutais refused to send him the secret of the preparation (clearly demonstrated by the letters he had deposited as evidence), which had forced him to devise one of his own. Guerin argued that he was the one who had "rediscovered" the identity of the *plante fébrifuge* and had invented the preparation that secured the privilege, and so Lajutais' brevet should be revoked, and the monopoly over the *poudre fébrifuge* granted to him.

Lajutais for his part maintained that Guerin was not the true "restaurateur du secret" because he had not identified the correct plant: it was *tithymalus linifolium*, not *tithymalus amigdaloïdes*![80] Likewise, he persistently denied ever being ignorant of this secret. In his account of events, he knew exactly which species was the *plante fébrifuge* from the beginning, and its preparation was transmitted to him personally by the Chevalier de Guiller. All of the evidence in his correspondence with Guerin that might

[78] Lajutais to Guerin, October 17, 1732, quoted in AN $V^7$ 246, (6), dossier 1, item 28, *Mémoire pour le sieur Guerin*, 2.

[79] AN $V^7$ 246, (6), dossier 1, piece 8, Guerin to Lajutais (November 3, 1732).

[80] Quoted in Guerin, *Mémoire*, 3.

suggest otherwise was simply part of a clever ruse on his part to mislead his subordinate and prevent him from stealing a secret that was rightfully his. He was merely curious to see if anyone in Paris knew the secret of the *poudre fébrifuge*: Guerin's mission to recover the secret on his behalf was nothing more than a fool's errand devised by Lajutais to keep his subordinate in the dark.

In his *Mémoire* Guerin concedes some of these points, but with important qualifiers. He argues that although they ended up using *tithymalus linifolium*, his conclusion that the operative plant was a species of tithymal was nonetheless crucial at the beginning of their investigation. Furthermore, the *tithymalus amigdaloïdes* he had first identified was just as effective as *tithymalus linifolium* for making the *poudre fébrifuge*: the latter's great virtue was simply that it was easier to find when foraging. And finally, he was also the one who discovered *tithymalus linifolium* anyway, and had a certificate to prove it (more on this later).[81]

Here it should be underlined that all of these claims were made in the course of a heated legal battle over whether or not Guerin and Lajutais were legal *associés* with equal rights to the not inconsiderable profits that were coming out of the sale of the drug. Leaving behind this maze of lies and recriminations for the moment, it is useful to draw recourse to the herbals and botanical works of Tournefort and Geoffroy, which, when placed alongside the evidence from Guerin and Lajutais, provide instructive hints about the true identity of the plant, its probable method of preparation as a febrifuge, and even the locations where it was being harvested.

[81] Ibid.

The only species of tithymal for which Tournefort provides a medical preparation in his *Histoire des plantes qui naissent aux environs de Paris* (1698) is what he calls *tithymalus cyparissias*, which he describes as growing outside of Paris in the Bois de Boulogne.

> The tithymal of which we speak is a good hydrogogue; it is proper to correct it through maceration in vinegar, or in a solution of cream of tartar: for as soon as this root is swallowed, it leaves a considerable bitterness and the impression of fire, which is felt not only in the throat, but all the way down the esophagus, and sometimes even in the stomach. This purgative is proper for hydropics, cachectics, and for those who have intermittent fevers: it can be used in all diseases where there is need to remove nasty leavens which resist ordinary purgatives.[82]

Tournefort's account of *tithymalus cyparissias* is taken up by Geoffroy in his entry on *esula major* (which he identifies with Tournefort's *tithymalus cyparissias*), in his *Traité de la matière médicale*, where a few other details are added.[83] Geoffroy closely follows Tournefort on its violence as a purgative and likewise admits its use as a febrifuge for intermittent fevers. He also adds several other details concerning how to soften or temper its purgative effects through maceration and how to prepare it as a powder. He explains that "the method by which the bark of the Esula root it corrected in our boutiques" is to macerate the plant's fresh bark or rind (*écorce*) in either vinegar, verjus, quince, lemon, or barberry (an evergreen shrub berry) for twenty-four hours, after which it is to be dried and given as a powder. He observes that it evacuates serosity (water buildups in tissues

[82] "Le Tithymal dont nous parlons est un bon hydragogue, *on a raison de le corriger par la maceration dans le vinaigre, ou dans la solution de crème de tartre* : car pour peu que l'on avalle de cette racine, elle laisse une acreté considerable et une impression de feu, qui se fait sentir non-seulement dans la gorge, mais tout le long de l'œsophage, et quelquefois mesme dans la ventricule […] Ce purgatif est propre pour les hydropiques, pour les caketiques, *et pour ceux qui ont la fièvre intermittente* : on peu s'en servir dans toutes les maladies où il faut emporter les méchans levains qui resistent aux purgatifs ordinaires," Joseph Pitton de Tournefort, *Histoire des plantes qui naissent aux environs de Paris avec leur usage dans la medecine* (Paris: De l'Imprimerie royale, 1698), 153. Emphasis added.

[83] Etienne-François Geoffroy, *Traité de la matiere medicale: ou, De l'histoire des vertus, du choix et de l'usage des remedes simples*, nouv. éd (Paris: Desaint et Saillant, 1756), 6:281–286.

beneath the skin), and can thus be useful against dropsy. Like Tournefort, Geoffroy also cites its potential utility against quartans and other intermittent fevers, but only when "more temperate" remedies have failed. He adds that it should never be given alone in such cases, but rather with other remedies to help moderate its effect. Anticipating Venel's later remarks, he also adds that the seeds of tithymal are good purgatives for peasants, who have strong viscera.[84]

It is difficult to say whether or not Guerin or Lajutais consulted Tournefort: it may have figured among the seven "books or tomes on medicine" which Lajutais lent to Guerin and wanted returned after their relationship soured. These are in fact the only books mentioned in their ledgers.[85] The remarks of Guerin in various places make it clear that the rind of the tithymal was their main interest, but the lists of equipment and supplies that appear in his and Lajutais' ledgers leave it unclear whether or not they were macerating the rind in verjus or some other liquid.[86]

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[84] Ibid.

[85] $V^7$ 246 (6) Cotte 3e 1739, "Journal en forme de compte," p. 7.

[86] The tools and materials on Lajutais expense ledger are: "deux cents livres pour achapt de sucre, pots de fayence, fourneau, ustancilles de verre et autres drogues pour l'arcanne (the name of a second drug which they sought to sell to the army); trente cinq livres pour achapt de papier, ficelle, boistes, grandes et petites pour envelopper et paqueter la poudre febrifuge a la maison du Sr Blanc; soixante livres pour six milliers d'imprimes contenant les vertus et usage de la poudre febrifuge; trente une livres pour avoir fait placer l'enseigne à costé de la boutique du Sr Blanc (18 *livres* of which went to the sign's painter); douze livres pour la façon de deux timbres de bois servant a faire la marque au haut des imprimes; seize livres pour avoir achepté une livre de laine a broder; soixante livres pour une garniture de feu consistant en deux landiers, une pelle, et pinsettes le tout d'argent aché (?); douze livres pour un serrure, soixante et dix livres pour l'achapt de bois de charbon pour l'usage de la chambre chez le Sr Blanc; vingt-cinq livres pour achapt de chandelles pendant le cours de l'année chez le Sr Blanc," AN $V^7$ 246 (6), cotte 3$^e$, "Journal en forme de compte que rend le Sr Lajutais au Sr Guerin cy devant son agent, ainsi ordonné par jugement de Mgrs les Commissaires généraux du Conseil," 3-5.

The "emballages, drogues, et ustancilles" Guerin purchased for their enterprise are: cloth, rope for shipping; "un arrosoire de fer blanc" (watering can?); a supply of over twenty-two pounds of cinchona for a project that was never realized; half a ream of paper; "deux grandes machines de bois doubles de fer blanc et quatre roulettes de cuivre"; a copper basin "devenue inutile à la Société," AN $V^7$ 246 (6), dossier 2, "Compte de recette et dépense que rend le S. Guerin au S. de Lajutais,"18r°-v°.

The ledgers also do not include labour costs, as these were likely paid by Lajutais and thus did not figure into Guerin's claims. A few hints do survive in the correspondence as to where and how the roots were collected and processed. We know that Guerin and Lajutais had foraged for tithymal in the Bois de Boulogne, where Tournefort had encountered various species of tithymal in his herborisations decades earlier.[87] At one point in his brief against Lajutais, in order to illustrate how badly indebted his partner was, Guerin points out that Lajutais did not even have the thirty *livres* necessary to pay their foragers or root gatherers (*chercheurs de racines*).[88]

The most information on the questions of where and by whom the plant was actually gathered can be found in Lajutais' oral deposition (*interrogatoire*), beginning June 8, 1738. Even more importantly, the questions furnished by Guerin that formed the basis of the interrogation, suggests that they finally recovered the true secret of Guiller's *poudre fébrifuge* only after they began producing it for the army. The commission's reporter, Le Roux, began by asking Lajutais if it is true that he employed a number of workers in 1735 to collect the roots necessary to produce their remedy. Lajutais confirmed that this is true, and was careful to note that they were paid from his accounts, not those of Guerin. Lajutais obviously assumed that the question was targeted at his finances and the sharing of costs and expenses, but Le Roux unexpectedly followed up

[87] See the following amusing annecdote from one of the questions Guerin furnished to Le Roux to be read to Lajutais during his *interrogatoire* (on which see below): "Sieurs Guerin et la Jutais eurent conjointement fait leurs soumissions pour fournir la poudre febrifuge aux hopitaux d'Italie ils n'en auroient qu'une foible quantité et qu'ils se transportent l'un et l'autre au bois de Boulogne pour chercher la plante propre a composer la nouvelle poudre et que dans le choix que le Sieur de la Jutais fit d'abord il tomba dans une telle erreur qu'en ostant l'ecorse de la plante qu'il avoit mal choisie il en fait incommodé au visage et aux autres endroits de son corps qu'il en avoit frotté," Interrogatoire 7v°. Lajutais for his part admits to going with Guerin to the Bois de Boulogne, but as usual, he categorically denies having made any errors on the identity of the plant, and in fact observes that he did not find the *plante fébrifuge* there at all.

[88] Guerin Mémoire, 7.

with a different question about one of the women he had employed to collect the roots, the wife of one Pelletier of Champigny:

> Is it true that in August of 1735 the aforementioned wife of Pelletier of Champigny told Sieur Guerin that she would bring him a species of root which a *chevalier* wearing a blond wig had ordered be collected in Champigny and which he used to make powders, with this difference: that he only used this species?[89]

Lajutais replied that he does not remember, but Le Roux pressed him on the question, asking if he recalled having questioned this woman with Guerin, after the latter brought her to his attention. Again Lajutais said he had no such recollection, so Le Roux asked again, providing further details from Guerin:

> Is it true that the woman Pelletier told Sieur Guerin and Sieur Lajutais that twenty-two or twenty-three years earlier, a Monsieur whose name she could no longer remember had come to live in Champigny, and that he had built a furnace in his home, and that he employed little children to peel the rind from roots similar to those which she had just brought, and that at that time Guerin told Lajutais that this was the species of tithymal that they needed? [90]

It should of course be remembered that Guerin is the author of this question. Unsurprisingly, Lajutais denies any memory of the events described, but he does not call it a lie or a slander (*injure*), as he does with most of Guerin's other accusations. Although it is never made explicit, the implication seems to be that the man with the blonde wig and the house with the furnace was the Chevallier de Guiller himself, and that this unnamed woman, described only as the "sister of one Belleville and the wife of one

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[89] "Interrogé d'office s'il n'est pas vray qu'au mois d'aoust mil sept cent trente-cinq la nommée Pelletier de Champigny dit au sieur Guerin qu'elle luy apportoit une espece de racine qu'un chevalier portant perruque blonde faisoit ramasser a Champigny et s'en servoit à faire des poudres avec cette difference : qu'il ne se servoit que de cette espece,"AN $V^7$ 246, (6), cotte 2e, 1738 Interrogatoire, fol. 14v°-15r°.

[90] "Interrogé d'office s'il n'est pas vray que la Pelletier dit au Sr Guerin et a luy Sr de la Jutais qu'il y avoit vingt-deux ou vingt-trois ans qu'un Monsieur dont elle ne se ressouvenoit pas du nom estoit venu demeurer a Champigny, qu'il avoit fait batir un four dans cette maison, qu'il occupoit de petits enfants a oster l'ecorce des racines semblablement a celles qu'elle venoit d'aporter et qu'alors le Sr Guerin dit a luy sieur de la Jutais que c'estoit la l'espece de Tytymale qu'il leur falloit." Ibid.

Pelletier of Champigny," happened to be one of the children that Guiller had employed more than two decades earlier to peel the bark from the plants necessary to make his powder.[91]

Thus, in Guerin's version of events, even as late as August 1735, he and Lajutais still had not succeeded in replicating Guiller's powder, and Guerin finally discovered the true secret by chance from one of their root gatherers. There can be no way of knowing with certainty, but this telling of events seems more plausible: if Guerin were simply interested in making himself the true discoverer of the secret, why would he admit that he still had not yet identified the plant in 1735? Further, why would he credit its discovery to a chance encounter with a root gatherer, rather than to his own ingenuity? If indeed this was how the secret was recovered, then the story has an important irony: the key to unlocking the secret of the *plante fébrifuge* did not come from printed herbals (which are curiously nowhere mentioned throughout the surviving evidence) or Guerin's inquiries with the learned botanists of the Jardin du Roi, but rather from the childhood memories of an herb woman.

*4. The legacy of the poudre fébrifuge, 1735-1808*

In 1735, after years of work, Lajutais and Guerin finally began to reap their rewards from the royal coffers. The scale of their operation is made clear by an *extrait* from the registers of the *Extraordinaire des guerres*, the financial body which managed war-related expenditures. Its treasurer, de Launay, provided the *commission* with a

[91] On the prominent role of herb women in disclosing secrets and an insightful discussion of their similarities with colonial informants, see Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge, Mass.: Harvard University Press, 2004), 96–100.

statement of how much of the *poudre fébrifuge* the army had bought in 1735 as part of their audit of Guerin and Lajutais accounts.

Restricting ourselves to their confirmed sales, from February to November 1735, the *Extrordinaire des guerres* paid out 10,025 *livres* to Guerin and Lajutais for 28,050 *prises* of their *poudre* (see Appendix 3, Figure 15).[92] This figure for their military contract dwarfs the total retail figures for the drug's sales, both by Lajutais personally and by their Parisian agent, which amount to less than 4,000 *prises* for an overlapping but longer period. As we shall see in chapter 6, the only sales volumes that compare to the military contract are those to other bulk purchasers, namely the navy and the East Indies Company. Add to this the fact that Guerin and Lajutais sold to the military at a discounted rate, roughly 7 *sols* per prise, as compared to 10 *sols* on retail. In spite of the fact that Guerin and Lajutais made considerably more per dose at retail prices, the vast majority of both their production and revenues were coming from their military contract.[93]

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[92] AN $V^7$ 246 (6), dossier 2, "Extrait du registre journal de Recette et Depense tenu par M. de Launay tresorier general de l'Extraordinaire des guerres pour l'armée xvii et trente cinq" (February 7 to November 4, 1735).

In February 1735, they sent 7,050 *prises* to Alsace (at a cost of 3,525 *livres*); another 3,000 prises were sent the following month to Metz (at a cost of 1,500 *livres*); 2,000 *prises* to Strasbourg in June (at a cost of 1,000 *livres*); 8,000 more *prises* to Metz (at a cost of 1,000 *livres*); and finally 8,000 *prises* for Metz and Strasbourg in November (at a cost of 3,000 *livres*). As there are 20 *sols* in a *livre*, this averages to a price of 7 sols per *prise* (or 0.35 *livres*), although it should be noted that the rate they were paid by *prise* fluctuated in this period. For details on the army sale as well as Guerin and Lajutais other clients, see also Appendix 3, Figure 15 and ch. 6, sect. 3.

[93] AN $V^7$ 246 (6), "Etat des poudres febrifuges que j'ay reçu de Messieurs De la Jutaye et Guerin et de ce que je leurs ay payé" (enclosed in Le Blanc *poudre fébrifgue* register). It should also be mentioned that Le Blanc took a 5% consignment on sales, so in total Guerin and Lajutais made 1,376 *livres* through him, 381 *livres* of which were deducted to pay off an initial advance (assumedly as a deposit in exchange for the supply of the *poudre* or to secure their business), leaving 949 *livres*.

Some cautions on these figures: although these revenue figures are likely accurate as they are based on verified receipts from the drug's purchasers, there are no similarly complete expense ledgers covering labour, equipment, supplies, rent, transportation, and storage. It is therefore impossible to know what proportion of these revenues were profit. It should also be remembered that those expense ledgers that are included provided to the commission were intended to settle scores between them, and thus, may

These sums seem to have been too large for Guerin and Lajutais to continue an honest collaboration, and soon their mutual distrust produced a sequence of legal actions that ultimately led to the formation of a special commission of the Conseil privé, the highest court of appeal in France, to settle their affairs. By 1736, Lajutais was arguing that Guerin had not followed through on a notarized agreement they had made to recover Guiller's pension and had since ceased providing him with accounts of his share of the sales of the *poudre fébrifuge*, which, he claimed, exceeded 12,000 *livres*.[94] Guerin for his part learned that Lajutais had retaliated by removing large quantities of the drug from their common stockpile in Vincennes, so he proceeded to the Prévôté de l'Hôtel, the legal jurisdiction covering the royal household and all royally privileged merchants, and secured a summons and court seizure of all "poudres et ustancilles" still in Lajutais' hands. Lajutais responded in kind by proceeding to another tribunal, the Châtelet, where he argued that Guerin was merely his *agent*, not a full partner or *associé*, and that the dispute did not concern his privilege per se. Lajutais thus secured an *évocation* (transfer) of the case to the jurisdiction of the Châtelet Parc civil. Continuing the jurisdictional tug of war, Guerin then upped the ante by going all the way to the Grand conseil, where he made a *requeste* arguing that Lajutais' brevet should be cancelled because he himself was the one who recovered the secret and the privilege for the *poudre fébrifuge*. A *règlement des juges* at the Chancellerie was then required to determine a definitive jurisdiction for their lawsuit.

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contain exaggerations designed to secure a bigger piece of the pie in the ultimate settlement (see most notably the 1,513 *livre* "bribe ledger" in Guerin's expense claims, entitled "Differents debourses secretes que le rendant a fair dans la veüe de se faire des amis et des protecteurs pour le bien de la Societe"). Indeed, if we take Guerin's expense claims seriously, the total revenues would only just cover the cost of his various movements on behalf of the society from 1732-1734.

[94] AN $V^7$ 246 (6), cotte 1er, Arrêt du Conseil d'État (May 28, 1737).

This eventually led to the August 4, 1736 *Arrêt du Conseil d'État* creating a *commission extraordinaire*.[95] The principal question to be settled, according to the *arrêts*, was whether or not there was in fact a *société* between Lajutais and Guerin (that is, whether they had formed a legal company or firm). The commissioners collected a large volume of evidence from both parties, which provides the basis for much of this chapter. Their *jugement*, rendered on June 3, 1737, ruled a compromise primarily in favour of Lajutais. No official notarized contract establishing a *société* between the two men could be found, in spite of the fact that Guerin produced several documents where he and Lajutais were referred to as *associés*. Lajutais was also confirmed as the rightful holder of the brevet which, although it was secured almost entirely through Guerin's efforts, was still in Lajutais' name. The concession to Guerin was that both men needed to furnish their accounts to the commission so that their profits up to the beginning of their contestations could be split equally. After which time, Guerin was prohibited from troubling Lajutais in his exercise of the privilege, and ordered to neither counterfeit, sell, or otherwise distribute the *poudre fébrifuge*, under the penalties indicated in the brevet, namely, a hefty 1,000 *livre* fine.

In spite of this ruling, the case continued to drag along, first by Guerin's request that the basis of the brevet be re-examined, and then by the conflict between their respective expense claims. The commission was periodically reconvened all the way up to 1743, when the issue of their accounts were settled. The following year a new dispute began when Lajutais ordered a new seizure of Guerin's "poudres, racines, et tablettes": it

[95] The memers of the *commission* were: the Sieurs de Lieu and Le Roux, councillors at the Grand conseil, and the sieur Montclas, councilor in the Chambre des comptes, Cour des aydes et finances de Montpellier, later replaced on January 12 by Lambert, another councillor in the Grand Conseil.

seems that Guerin had devised a drug of his own, which he called the *tablette fébrifuge*, for which he too had secured a military contract via Chicoyneau following trials at the Invalides. Lajutais quite naturally argued that these *tablettes fébrifuges* were clear counterfeits of his own *poudre fébrifuge*, and brought a new suit against Guerin as a counterfeiter.[96] I have found no final judgement for the case, although it is clear that Guerin continued to produce his *tablette fébrifuge* into the 1750s.[97] Despite having been edged out by Lajutais, we see here that Guerin was able to draw some benefits from all of his travails at the royal court and his close relationship with Chicoyneau.

Pierre Brodin de Lajutais appears to have continued exploiting his privilege for the remainder of his days. Before his death, he turned his attention to agronomy, publishing a book in 1752 on the use of saltpeter as fertilizer, calling it the "true philosophers' stone."[98] He renewed his privilege one last time with Chicoyneau's successor, the first physician Jean-Baptiste Sénac (1693-1770), but after his death it was no longer sold and fell into disuse.[99] This prompted the inquiry by the anonymous Avignon physician and the subsequent response from the Marquis de Chambray in the 1768 *Mercure de France*, which opened this chapter. A few years later, in May 1772, another reader of the *Mercure*, who signed only as R.L.V., published a follow-up to the

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[96] Etienne Guerin and Rouseel (avocat), *A nosseigneurs les commissaires du conseil, Députez pour juger en dernier ressort les Contestation qui se sont ci-devant élevées entre les sieurs Guerin et la Jutais* […] *signifié 20 mars 1744* (Paris: veuve Merge, 1744).

[97] François Chicoyneau, *Lettre de Monsieur le premier medecin du Roy, au sujet des Tablettes fébrifuges du sieur Guerin* (Paris: s.n. 1743); and *Manière de se servir des tablettes fébrifuges [du sieur Guérin], distribuées par ordre du Roi dans les hôpitaux* (Paris : Imprimerie royal, 1757).

[98] Pierre Brodin de La Jutais, *L'abondance ou véritable pierre philosophale, qui consiste seulement à la multiplication de toutes sortes de grains, de fruits, de fleurs et généralement de tous les végetatifs* (Paris: Delaguette, 1752).

[99] AN $V^7$ 246 (6). Lajutais was 92 years old at his death; this and other details are from the preface to the 1805 edition of Lajutais' principal published work, a treatise on agronomy, republished in Philadelphia by his son-in-law: see Pierre Brodin de la Jutais, *L'abondance, ou, La véritable pierre philosophale consistant en un moyen de multiplier abondamment les grains, les fruits, les fleurs, et tous les végétaux généralement*, ed. Faming de La Jutais (Philadelphia: s.n., 1805).

1768 article: he had personally gone to the original address of Lajutais, indicated on the pamphlets to the *poudre fébrifuge*, and found his widow and two daughters. He reported that they still possessed the secret.[100]

Alerted to the continued commercial potential of their inheritance, the Lajutais sisters, Marie-Victoire and Marie-Thérèse, appealed to the recently re-established *Commission des remèdes secrets* in order to request a renewed brevet for the *poudre fébrifuge*.[101] Their request was denied by the commissioners, for reasons we shall see in a moment, but the Lajutais sisters did not stop there. Much of the correspondence on their behalf is written by one M. De Moulinot, the husband of the elder daughter, Marie-Victoire. De Moulinot was a former infantry captain and First Lieutenant of the King's Wolf-Catchery (*louvetrie*), an office of the royal household which seems to have afforded his family important connections.[102] Together with De Moulinot, the Lajutais sisters sought assistance from a higher power, namely Louis Phélypeaux, Duc de La Vrillière, the Secretary of State for the King's Household, the official who, as we have seen, was ultimately responsible for dispatching brevets.

In their extensive *mémoire*, which was later forwarded to the Commission, the Lajutais sisters pleaded with La Vrillière concerning their difficulties. They implied that the commission was exceeding its powers and defying the wishes of the king by "seeking to suppress a remedy precious to the State and to Humanity, and whose goodness, efficacy, and utility have been observed by sixty years of continued success" and

[100] *Mercure de France* (May 1772), 201-202.

[101] See above, ch. 3, sect. 5 for the role of women in the *orviétan* privilege and comparisons to cases in Bologna, Venice, and London.

[102] ANM SRM 101 d 40 no. 3.

repeatedly approved by royal physicians from Fagon to Sénac.[103] They documented these claims with a series of *pièces justificatives*, preserved in their family papers or painstakingly transcribed from the government archives, literally chronicling the entire history of the *poudre*. By the 1770s, the legacy of the *poudre* from generation to generation had itself become the most effective argument in its favor. The Lajutais sisters included their father's privileges from 1733, 1743, and 1753, the recommendations of Fagon and Boudin from 1713, as well as other attestations documenting the more recent history of the *poudre*'s use by the French army and the East India Company—these include an attestation by Chicoyneau to its utility in the campaigns of 1735 and 1736. Chicoyneau cites numerous surgeons' attestations of its efficacy in the field, and a 1737 letter from the *Conseil supérieure de Sénégal* underlining its utility against fevers in West Africa.[104]

La Vrillière was persuaded by their arguments. He sent repeated letters to the commission and to specific members, inquiring as to their motives in refusing such an evidently successful drug. He also had the royal first surgeon, Germain Pichault de La Martinière (1697-1783), perform an independent evaluation of the drug. La Martinière reported finding nothing dangerous to health, and found that the plant that was its main ingredient was well-suited to curing fevers. This was more than enough to convince La Vrillière: in spite of the commission's objections, he informed them by letter that given the long history of the drug and the support of La Martinière, he would still grant the

[103] ANM SRM 111B d 29, "Mémoire des Demoiselles Lajutais."
[104] Ibid. See below, ch. 6, sect. 3.

brevet—which he did, on July 4, 1775[105]—and that they should register it. As a final reminder of his ultimate authority as Secretary of State in actually issuing brevets, La Vrillière also specified that his letter should be read aloud at their next meeting.[106]

The force of the drug's long history of attestations had prevailed in favor of the Lajutais sisters, and a privilege for the *poudre fébrifuge* was granted once again, for the fifth time. But what about the objections of the commissioners? Only a summary of the original 1772 rejection has survived, probably based on a draft by Gérard Louis Deslon de Lassaigne, the commissioner in charge of examining the drug:

> The *poudre fébrifuge* of the Demoiselles de la Jutais, has been viewed as suspect and dangerous, having been drawn from the root of a plant which abounds in a very bitter, burning milky sap (*suc laiteux*), apt to inflame the mouth, and which violently purges by vomit and stool.[107]

Whatever the treatment they had applied to the root, the commissioners argued, it had not sufficiently moderated these attributes. After a second test, and the complaints of one member who had witnessed the ill effects of the drug on patients, the Lajutais sisters' petition was denied. The commissioners' concerns, particularly those surrounding the "milky sap" or latex, were forwarded to La Vrillière, who rejected them based on the testimony of La Martinière. We see here, almost fifty years later, the same criticisms that were first voiced in 1714 by Boizard at the Port Louis naval hospital: far from a febrifuge, the drug was merely a violent purgative. In spite of these objections, it was still granted a new privilege through the intervention of the Secretary of State with the

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[105] See also the broadside version of their brevet, preserved with a host of other such advertisements in ANM 108011: *Brevet qui permet aux demoiselles de la Jutais […] de vendre […] une poudre royale fébrifuge* (Paris: L. Cellot, 1775).

[106] ANM SRM 111B d 30 La Vrillière to Alléaume (July 15, 1775).

[107] ANM SRM 111B d 29, Assembly of July 2, 1775.

medical support of a senior royal practitioner (the first surgeon rather than the first physician in this case), just as it had been in 1713 and 1733.

Marie-Victoire was widowed and remarried one Joachim Noël Famin, dit Faming, merchant, and died in 1811.[108] Faming, who owned properties across the Atlantic in Savannah, Georgia, appears to have taken an active interest in the legacy of his father in law. In 1805 he republished Lajutais' treatise on fertilizers in Philadelphia dedicating it to the President, Thomas Jefferson.[109] In 1808 he was back in Paris, where he took out a patent for a "procedure for improving the quality of bread," which also appears to have been a secret devised by Lajutais.[110] He appears not to have taken out a patent on the *poudre fébrifuge*—although we do know that in 1808 he was selling it at 90 rue Blanche de Castille on the Ile Saint-Louis, and that he was registered with the Police Sanitaire as "médecin-naturaliste à Paris" between 1806 and 1809.[111] Like Helvétius' remedies, the Guiller-Lajutais *poudre fébrifuge* survived beyond the Revolution and travelled well beyond metropolitan France.

*5. Conclusion: Continuity and change*

This chapter has followed a single drug from the time of Louis XIV to the end of the Ancien Régime and beyond. By looking closely at the medical trials that formed an

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[108] MC/ET/XLII/750, May 20, 1811, Inventaire de Mme. Faming (Marie-Victoire Brodin de Lajutais).

[109] Brodin de la Jutais, *L'abondance, ou, La véritable pierre philosophale consistant en un moyen de multiplier abondamment les grains, les fruits, les fleurs, et tous les végétaux généralement*. The dedication is to "Son Excellence des John [sic] Jefferson, Président des États-Unis de l'Amérique." In spite of the error in name, the book still made its way into Jefferson's library: see E. Millicent Sowerby, ed., *Catalogue of the Library of Thomas Jefferson* (Washington: The Library of Congress, 1952), 1:722.

[110] *Archives des Decouvertes et des inventions nouvelles, faites dans les sciences, les arts et les manufactures, tant en France que dans les pays etrangers* (Paris: Treuttel et Würtz, 1809), 233–234.

[111] See the *éphémérides* notice in *La Cité: bulletin de la Société historique et archéologique du IVe arrondisement de Paris*, vol. 7, no. 25 (1908) : 366; Faming is also listed in Alexandre Labat et al., *Police sanitaire XVIIe siècle-1923: État numérique détaillé de la sous-série F8* (Paris : Archives nationales, 2008), 198: "Faming de la Jutais, médecin-naturaliste à Paris (1806-1809)." I plan to investigate the post-revolutionary legacy off the *poudre* more closely the next time I am in Paris.

important part of how privileges were allotted, it demonstrates that in spite of repeated reforms, the granting of pharmaceutical privileges remained contingent upon the personal authority and support of the royal first physician. The authority of the secret remedies commission could be overridden by the actual officials charged with recommending and granting privileges.

The case of the *poudre fébrifuge* also shows that medical trials under the personal supervision of the first physician played a crucial but largely undocumented role in building confidence in a new drug. Although it was destined for use by large numbers of soldiers in the field, there was no appeal to large numbers of subjects or rudimentary statistics. Indeed, no burden of proof or reasoned reports from the first physician appear to have been necessary at all: these would imply a higher medical authority in need of convincing. Instead, it seems that the personal judgment of a man who had literally been entrusted with the health of the monarch was quite sufficient in deciding whether or not a drug "worked," whether it was useful to the interests of the fiscal-military state, and whether it should be rewarded with a privilege. Fagon and Chicoyneau served as medical brokers, mediating between the interests of the state—represented by the Secretary of State for War, the Navy, and the Royal Household—and those of medical entrepreneurs like Guiller and Lajutais.[112]

Personal attestations from other sources also played a crucial role in legitimating the *poudre fébrifuge*. Over the course of sixty years, Guiller, Lajutais, and his daughters assembled a veritable archive of positive attestations from a variety of medical, civil,

[112] On the role of brokers in mediating between patrons and clients of different ranks, occupational spheres, and geographic origins, see Sharon Kettering, *Patrons, Brokers, and Clients in Seventeenth-Century France* (Oxford: Oxford University Press, 1986), 4, ch 2.

ecclesiastic, and military authorities. By the end of the eighteenth century, the accumulated weight of earlier written testimony of the drug's efficacy, coupled with powerful patronage, could actually trump new medical trials of the drug that found it to be ineffective and even dangerous. Throughout the eighteenth century, the medical legitimation for a proprietary drug did not depend upon reports of large-scale institutional trials or "disinterested" testing: rather, it was contingent upon a highly personal variety of authority, judgement, and recommendation. Some efforts toward large-scale tests were apparent, most notably Pontchartrain's circulation of the *poudre fébrifgue* to the Atlantic port hospitals in 1714, but on the whole, personal brokerage and patron-client relationships continued to hold far more sway than bureaucratic testing.

Although the history of the *poudre fébrifuge* is unique for the number of medical trials spread out over a long span of time, it also accentuates several themes that have appeared in the previous case-study chapters. Like *orviétan*, the story of the *poudre fébrifuge* shows that medical secrecy was rife with pitfalls. In this case, secrecy was a double-edged sword that could both help and hinder the commercial exploitation of a drug: it could provoke "succession crises" in the medical dynasticism characteristic of the early privilege system, foster uncertainty between partners, and force the one generation to literally reinvent the remedies of the past. While the Contugi case shows us what happened when a family medical secret was revealed to the public, the Guiller-Lajutais case shows us what could happen when a secret was lost.

Finally, as in the case of Helvétius, the Guiller-Lajutais dynasty offers us a window onto the emergence of the proto-industrial production of a new class of uniform pharmaceuticals, sold in bulk to the state and destined for large-scale distribution. The

success of both the 1713 and the 1733 brevet bids were heavily conditioned by a need for one-size-fits-all medicinal specifics that could furnish solutions to pressing military health problems. This was already apparent in the case of Helvétius' dysentery remedy, but the *poudre fébrifuge* shows that even when a reputedly effective medicinal specific such as cinchona was available, there was still an interest in finding another that was cheaper and more readily available. In both the Helvétius and Guiller-Lajutais cases, however, the radical increase in the scale of production was not matched by a rupture with earlier modes of medical legitimation. Despite attempts to create a more bureaucratized testing regime, medical privileges and military supply contracts continued to hinge upon the personal authority of the first physician within the wider culture of court patronage.

# Chapter 6

## Corporate Consumers and the Global Circulation of Proprietary Medicines

Louis Laneau, Apostolic Vicar of Siam and member of the Paris Foreign Missions Society (*Société des Missions étrangères de Paris*, MEP), wrote a letter to the Society's directors on November 14, 1693, in order to acknowledge the receipt of a supply of drugs for the society's missionaries in Ayutthaya. The drugs in question were Adrien Helvétius' proprietary *remède spécifique* against dysentery. According to Laneau, bowel flux (*cours de ventre*) and its more serious manifestation, dysentery, was the leading killer of missionaries in Siam.[1] As such, considerable expenses could be justified in attempts to relieve it:

> If these remedies are as infallible as is marked, then they are just what we'll need in these countries, where these ills are very frequent, protracted, and often deadly. No missionaries should be allowed to leave without being equipped with them, for though they cost dearly, the travels of a missionary and his life cost even more.[2]

Laneau thus acknowledged that spending money on expensive remedies like those of Helvétius and shipping them to Southeast Asia was justifiable and even necessary, not only given the inherent value of human life, but also the overall expense which would be shouldered by the MEP in transporting (and assumedly training) new missionaries to replace them. As a matter of corporate policy, the MEP fathers should all be equipped with such medications, assuming of course that they were as "as infallible" as advertised.

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[1] *Cours* and *flux* are synonymous. See *Le Dictionnaire de l'Académie française* (Paris: Coignard, Paris, 1694), 1:270. Helvétius for his part classes the *flux de sang* (bloody flux) and *dysenterie* as especially severe stages of *cours de ventre*: see *Traité des maladies les plus frequentes* (1703 ed.), 262.

[2] AME 881 (Siam), 171-172, Laneau to the MEP Directors (November 14, 1693). "Nous venons de recevoir certains remèdes pour le cours de ventre, s'ils sont infaillibles comme il est marqué, c'est justement ce qu'il faut dans ces pais cy, ou toutes ces maux sont très fréquents, très longs et très souvent mortels, il ne faudroit point laisser partir de missionnaires sans les pourvoir, car bien qu'ils coûtent cher, les voyages d'un Missionnaire et sa vie coûtent encore bien d'avantage."

Implicitly, Laneau has in mind here the overall goals of the MEP mission, which at the time of his writing had recently faced a near-catastrophic setback in the form of the coup that elevated the staunchly anti-European Phetracha to the throne of Siam in 1688. Following the French military's attempt to seize the port of Bangkok, Laneau, eight MEP fathers, and their thirteen indigenous seminarians were all imprisoned.[3] These seminarians were the embodiments of the MEP's main objective, that of establishing an indigenous clergy and episcopal structure in Southeast Asia. They were eventually released, and over the following decades, Helvétius' drugs were purchased in bulk by the MEP and shipped halfway across the world to Siam as well as to adjoining MEP missions in Tonkin and Cochinchina (the northern and southern halves of modern Vietnam) in order to provide crucial medical support for this missionary project. Although these drugs were destined for use by the missionaries and their indigenous seminarians and parishioners, they were purchased in Europe not by individual consumers in the marketplace, but by the MEP as a "corporate consumer" looking out for the health of its agents overseas.

As a "corporate consumer" purchasing drugs in bulk for its overseas agents, the MEP was not alone. Wherever French soldiers, sailors, missionaries, and traders went in the world, they brought remedies with them. Although many of these were medicinal simples, transported across the ocean to be consumed or compounded upon arrival, a growing number were pre-packaged proprietary drugs compounded in Europe. "Corporate consumers" like the MEP often served as crucial intermediaries between the European producers of these remedies and the sick patients who actually ingested them.

[3] On this period of the MEP mission in Siam, see Alain Forest, *Les missionnaires français au Tonkin et au Siam, XVIIe-XVIIIe siècles : analyse comparée d'un relatif succès et d'un total échec*, vol. 1 (Paris: L'Harmattan, 1998), 236–248.

This chapter will argue that the peculiar needs, constraints, and objectives of European overseas corporations—namely the missionary societies and joint-stock trading companies which played a crucial role in building the first global era—made them particularly well-suited customers for the standardized, one-size-fits all proprietary drugs developed by vendors like the Helvétius and Guiller-Lajutais monopolies.

The preceding chapters provided multi-generational case studies of three of these proprietary drugs: the Contugi family's *orviétan*, the Helvétius family's dysentery *spécifique*, and the Guiller-Lajutais *poudre fébrifuge*. They followed the careers of the vendors, their monopoly privileges, and where possible delved into the medical secrets of their drugs. But with the exception of a few forays into the French provinces, the focus was on actors and events at Paris and Versailles, the primary loci of the "court capitalism" in which pharmaceutical monopolies were enmeshed under the Old Regime.

This final chapter will follow the same three drugs as they travelled outside of France in the hands of corporate consumers, to consider the role each played in French military, missionary, and commercial endeavors, from the 1680s to the 1730s. Its primary aim is to illustrate the hitherto unrecognized importance of what I call "corporate consumers" in distributing French proprietary drugs overseas. In the seventeenth and eighteenth centuries, the most prominent classes of long-distance corporations were, on the one hand, the globalizing missionary orders and societies, particularly those of Catholicism, and, on the other, the great Western European overseas trading companies.[4]

[4] See above, ch. 1, sect. 1. A "corporation" or "corps" in the Ancien Régime context could of course refer to any group individuals, most notably craft guilds, who had collectively been granted a privilege by a sovereign or a local civil authority which recognized them as a collective legal entity. In this chapter I will be focusing not on those corporations whose privileges were bounded by city walls or the borders of a kingdom, but rather on what Steven J. Harris calls "long-distance corporations" whose privileges and networks extended overseas. See Steven J. Harris, "Long-Distance Corporations, Big Sciences, and the Geography of Knowledge," *Configurations* 6, no. 2 (1998): 276–279; Lucien Bély,

In this chapter I explore how French exemplars of both types of corporation, namely the Paris Foreign Missions Society (MEP), and the French East Indies Company (*Compagnie des Indes orientales*), became important consumers of proprietary drugs in the decades around 1700.

Steven J. Harris has pointed to the critical role of the overseas networks of these long-distance corporations in European knowledge production, as well as their potential utility in solving problems in the scale of historical analysis by providing a "meso-level" subject of inquiry for global history, an intermediate scale of analysis between highly local (micro-level) case studies and rarefied historical metanarratives (the macro-level), which tend to privilege the state, macroeconomics, and international politics.[5] The networks of early modern European knowledge production and the varieties of exchange with indigenous knowledge traditions, has received considerable attention over the past two decades, with botany and colonial bioprospecting playing a significant role.[6] While the colonial state and metropolitan state-sponsored institutions remain a privileged sphere of inquiry, some long-distance corporations, particularly the Society of Jesus, have also

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"Corps, Compagnies, Communautés," *Dictionnaire de l'Ancien Régime* (Paris: Presses Universitaires de France, 2010); Philippe Haudrère, "Compagnies de Commerce," *Dictionnaire de l'Ancien Régime* (Paris: Presses Universitaires de France, 2010). Although overseas trading companies, guilds (*communautés d'arts* or *jurandes*), and religious societies like the MEP all have important organizational differences, they share one common basis: their legal existence is recognized by the monarch through the granting of privileges, usually in the form of letters patent.

[5] Harris, "Long-Distance Corporations, Big Sciences, and the Geography of Knowledge," 299–304.

[6] The literature is vast, but see esp. Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge, Mass.: Harvard University Press, 2004); Londa Schiebinger and Claudia Swan, *Colonial Botany: Science, Commerce, and Politics in the Early Modern World* (Philadelphia: University of Pennsylvania Press, 2005); Harold J. Cook, *Matters of Exchange Commerce, Medicine, and Science in the Dutch Golden Age* (New Haven: Yale University Press, 2007); James E. McClellan and François Regourd, *The Colonial Machine: French Science and Overseas Expansion in the Old Regime* (Turnhout: Brepols, 2011), 287–302.

gained prominence in accounts of the production and circulation of knowledge.[7] My goal here however is not to explore the role of corporations as *producers* of medical or scientific knowledge, but rather to look at them as *consumers* of medical goods.

Following this line of inquiry takes us beyond the "inflow" of reports and specimens into Europe to also consider the ways in which this knowledge was capitalized upon by European entrepreneurs. In the case of medicine, this means moving from colonial bioprospecting to explore how indigenous European substances and exotic non-European therapeutic substances whose value and utility had been recognized by Europeans were transformed and commodified. As Chapters 2 and 3 have already suggested, the processing, compounding, and chemical transformation of these substances in Europe, coupled with their branding and packaging and their intellectual incorporation into European medicine, renders the binary between exotic and indigenous drugs problematic. The ipecacuanha that formed the basis of the Helvétius family's fortune was collected in Brazil, but only reached its users after first passing through his laboratory in Paris, where it was transformed into his proprietary *poudre spécifique*

[7] On the Jesuits and the global circulation of materia medica, see Sabine Anagnostou, "Jesuit Missionaries in Spanish America and the Transfer of Medical-Pharmaceutical Knowledge," *Archives Internationales d'histoire des Sciences* 52 (2002): 176–97; Sabine Anagnostou, "Jesuits in Spanish America: Contributions to the Exploration of the American Materia Medica," *Pharmacy in History* 47, no. 1 (January 1, 2005): 3–17; Ines G. Županov, *Missionary Tropics: The Catholic Frontier in India, 16th-17th Centuries* (Ann Arbor: University of Michigan Press, 2005), esp. ch. 6; Claudia von Collani, "Mission and Medicine: Between Canon Law, Charity and Science," in *History of Catechesis in China*, ed. Staf Vloeberghs (Leuven: Ferdinand Verbiest Institute, 2008), 37–68; Patrícia Albano Maia, "Práticas de Cura No Encontro de Culturas: Jesuítas E a Circulação de Receitas Médicas," in *Anais Do XXVI Simpósio Nacional de História – ANPUH* (São Paulo, 2011), 13; Charlotte de Castelnau-L'Estoile et al., eds., *Missions d'évangélisation et circulation des savoirs, XVIe-XVIIIe siècle* (Madrid: Casa de Velázquez, 2011); Beatriz Puente-Ballesteros, "Jesuit Medicine in the Kangxi Court (1662-1722): Imperial Networks and Patronage," *East Asian Science, Technology, and Medicine* 34 (2012): 86–162; Amy Buono, "Interpretative Ingredients: Formulating Art and Natural History in Early Modern Brazil," *Journal of Art Historiography*, no. 11 (2014): 1; Sabine Anagnostou, "Forming, Transfer and Globalization of Medical-Pharmaceutical Knowledge in South East Asian Missions (17th to 18th C.) – Historical Dimensions and Modern Perspectives," *Journal of Ethnopharmacology*, Potent Substances: On the Boundaries of Food and Medicine, 167 (June 5, 2015): 78–85. See also Puente-Ballesteros forthcoming monograph, "The Naked Emperor: Jesuit Surgeons, Physicians and Apothecaries in the Service of the Kangxi Court (1662-1722)," in preparation for Brill.

against dysentery.[8] Likewise, the search for indigenous European alternatives to exotic, expensive, and difficult to secure supplies of simples like cinchona bark, also problematizes the indigenous and exotic binary: the common European wood spurge *tithymalus amigdaloïdes* could emerge as the proprietary *poudre fébrifuge* only in direct comparison to (and competition with) cinchona.[9]

Whatever the exotic or indigenous origin of these substances, in many cases the story of their transformation into a European proprietary drug does not end in Europe: rather, there was also an "outflow" of substances that were exported (or re-exported) for use elsewhere in the world in their new, transformed states. Some of these proprietary drugs travelled across oceans in the hands of individual consumers, as is the case with *orviétan*, or were sent in wholesale quantities to local apothecaries who would then sell them to individual consumers, as is the case with most English proprietary drugs in North America.[10] The first section will explore how instances of individual consumption and successful use could elevate a drug to consideration as an object of corporate consumption through the example of *orviétan* in North America. Sections two and three will focus on concrete examples of corporate consumption in the global distribution of French proprietary drugs, following the drugs of Helvétius and Lajutais through the overseas networks of the MEP and the French East Indies Company.

1. *Prospects for corporate consumption: Orviétan and the poisons of North America*

In the final decades of the seventeenth century, French military and trading interests endeavored to build a network of fortified posts in the continental interior, with

[8] See above, ch. 4.
[9] See above, ch. 5.
[10] Renate Wilson, "Trading in Drugs through Philadelphia in the Eighteenth Century: A Transatlantic Enterprise," *Social History of Medicine* 26, no. 3 (2013): 352–63.

the dual goal of bolstering Louis XIV's territorial claims to the continental interior and of defending the fur trade with indigenous peoples against the two-pronged encroachment of the New England colonies and the newly-formed Hudson's Bay Company. The most conspicuous *remède secret* to play a role in these endeavors is, without a doubt, the poison antidote *orviétan*. *Orviétan* served as a vital medical asset to several of the most prominent French agents who were working to extend French influence into the vast lands between Hudson Bay and the Gulf of Mexico. For the purposes of this chapter, *orviétan* is especially interesting because it was first recognized as an important therapeutic asset in North America through instances of individual consumption, likely having been purchased by agents themselves. By the end of the 1680s, however, its reputation led it to be framed as a crucial part of the medical equipment of larger expeditions, financed and organized by "corporate consumers" such as the military and trading companies.

References to *orviétan* are sprinkled across the far-flung travel narratives of figures such as René-Robert Cavelier de La Salle, Henri de Tonty, Louis Hennepin, Pierre-Esprit Radisson, and the Baron de Lahontan, which are replete with various forms of poisoning through spoiled food, toxic plants, and rattlesnake venom, all of which fell within *orviétan*'s purview as an antidote.[11] European agents recognized these lands as inherently hostile climates filled with poisons known and unknown, and an antidote like *orviétan*, which could be used to guard against a wide variety of potential poisons, was a

[11] On the various uses of *orviétan* and on early modern definitions of poison or *venenum*, see above, ch. 3. See also Frederick W. Gibbs, "Specific Form and Poisonous Properties: Understanding Poison in the Fifteenth Century," *Preternature: Critical and Historical Studies on the Preternatural* 2, no. 1 (2013): 19–46. Note once again that this does not make *orviétan* a panacea: it merely shows that poison or *venenum* was a broad pathological category. *Orviétan* was explicitly advertised as an antidote against a variety of "vénins," stretching from the venom of vipers and scorpions and poisonous mushrooms to the bites of rabid dogs and even plague.

particularly desirable item of materia medica to have brought along. It is not clear in all cases whether the *orviétan* in question was that produced by the Contugi family: the drug's North American users never specify which vendor they purchased it from, and, as Chapter 3 has shown, the Contugi trade had to compete with several rival producers by the 1680s, following the publication of the drug's secret recipe. Whatever the specific vendor in each case, it is nonetheless remarkable that *orviétan* appears to have been preferred even above officinal antidotes with similarly broad applicability, notably theriac. Indeed, the proliferation of interlopers on the Contugi *orviétan* monopoly at almost exactly this time and the popularity of *orviétan* over theriac are likely related phenomena.[12]

The rationale for bringing *orviétan* to North America in the first place probably originates in a fear of rattlesnakes—virtually a leitmotif in French North American travel narratives. The sight alone of three large rattlesnakes crossing his path while climbing a rock face was enough to give La Salle a fever in 1669 and convince him to abandon the expedition he was accompanying and return to Montreal.[13] We know from Henri de Tonty that a supply of *orviétan* was among the equipment that La Salle's expedition brought with them during their explorations down the Mississippi.[14] The Recollect Friar Louis Hennepin, also a member of the Mississippi expedition, likewise reported many

[12] See the Boulogne episode described above, ch. 3, sect. 3.

[13] Gabriel Nadeau, "Le grand électuaire de l'orviétan au pays de la Nouvelle-France," *L'Union médicale du Canada* 105 (1976): 674. These were probably Massassauga rattlesnakes, now an endangered species in Ontario. The expedition La Salle was accompanying was that of the Sulpicians François Dollier de Casson and René Bréhant de Galinée, who went on (minus La Salle) to be the first French missionaries to take the lower lakes route (rather than the Ottawa River) to Lake Huron. See James H. Coyne, ed. *Exploration of the Great Lakes 1669-1670: Galinée's Narrative and Map with an English Version* (Toronto: Ontario Historical Society, 1903), 40-41.

[14] "Je fus frappé d'un poison, mais, ayant recours à l'orvietan, Dieu me renvoya le santé," Pierre Margry, *Mémoires et documents pour servirà l'histoire des origines francaises des pays d'outre-mer. Découvertes et établissements des Francais dans l'ouest et dans le sud de l'Amérique Septentrionale (1614-1754).* (Paris: Maisonneuve et cie., 1879), 1:557; Nadeau, "Le grand électuaire de l'orviétan au pays de la Nouvelle-France," 693.

close-calls with rattlesnakes. He describes a particularly memorable episode in which he and one of his French companions witnessed an especially large rattlesnake slithering its way up the face of a cliff, eating eggs from birds' nests as it went. The snake eventually fell to its death, but the horror of the scene led both Hennepin and his companion to suffer from frequent nightmares, both during and after their ventures in the upper Mississippi valley.[15] The similarities between rattlesnakes and vipers, which as we have seen were intimately associated with *orviétan*, was likely crucial in motivating La Salle and Hennepin to bring *orviétan* with them: vipers were one of the drug's main ingredients as well as being part of its printed advertising and the associated stage-show, where the "charlatan" vendor was often bitten by a viper and then saved by consuming the antidote.

While the fear of rattlesnake bites may have provided the initial impetus to bring along *orviétan*, the durable lead cases in which *orviétan* was sold,[16] its alleged twenty-five year shelf life, and the multitude of uses to which it could be put as an antidote no doubt played a role in this choice. The most diverse account of these uses during French explorations down the Mississippi valley comes from the Recollect Hennepin. As Hennepin's account demonstrates, *orviétan* not only served immediate medical purposes for the members of the expedition, but also played a crucial role in their relations with the Santee Sioux.

In 1680 La Salle sent Hennepin and two other Frenchmen down the Illinois River to where it joins the Mississippi. Loaded down with furs, they were unexpectedly taken captive by a Santee Sioux war party and forced to come far north to their village near

[15] Louis Hennepin, *Nouvelle decouverte d'un tres grand pays situé dans l'Amérique entre le Nouveau Mexique, et la mer glaciale* (Utrecht: G. Broedelet, 1697), 385–386.

[16] See above, ch. 3, and appendix 2 for images; see also below, sect. 3, on how Helvétius' cheap paper packaging could impede the global circulation of his remedies.

Mille Lacs, in present-day Wisconsin.[17] There Hennepin was adopted by the village chief, Aquipaguetin, and by his own account, his life and those of his companions were preserved through the barber-surgeon-like services he was able to provide in the form of a razor used for bloodletting and shaving, on the one hand, and a stock of *orviétan* and other medications on the other. He explicitly mentions using *orviétan* to save young Santee men who had been bitten by rattlesnakes, and also mentions using theriac to revive a Santee woman who had attempted to commit suicide.[18] Unable to appeal to their souls for salvation, Hennepin explains that he instead appealed to their bodily animal natures through these services, a theme we shall see again with the MEP in Southeast Asia (sect. 2). By his own account he also tried to leverage these services with his two French companions, who once tried to abandon him eight hundred leagues from Canada because their canoe was half-rotted and, in their eyes, he added unnecessary weight and slowed their paddling. Hennepin pleaded with them, arguing that without the credit he had obtained for all of them through his medical services to the Santee, they would all have been lengthily tortured and killed.[19]

*Orviétan* was not only handy in treating snakebites among the Santee, however. It is also cited for twice saving Hennepin himself and one of his French companions from

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[17] Hennepin calls them *Nadeoüessans* or *Nadouessioux* (Sioux), or more specifically *les Issati* (Santee or Isáŋyáthi). See Patricia C. Albers, "Santee,".*Handbook of North American Indians* vol. 15, *The High Plains*, pt. 2 (Washington: Smithsonian Institution, 2001), 761-776.

[18] Hennepin, *Nouvelle decouverte d'un tres grand pays*, 378; Louis Hennepin, *Description de la Louisiane : nouvellement decouverte au sud'oüest de la Nouvelle France, par ordre du roy. Avec la carte du pays: Les moeurs & la maniere de vivre des sauvages.* (Paris: veuve Sebastien Huré, 1683), "Mœurs" 36. Following the common usage with *orviétan*, Hennepin probably sucked out the venom and then applied the powder to the wound, after scarifying it with his razor.

[19] Louis Hennepin, *Description de la Louisiane : nouvellement decouverte au sud'oüest de la Nouvelle France, par ordre du roy. Avec la carte du pays: Les moeurs & la maniere de vivre des sauvages.* (Paris: veuve Sebastien Huré, 1683), 263–264; cf. Louis Hennepin, *Nouvelle decouverte d'un tres grand pays situé dans l'Amérique entre le Nouveau Mexique, et la mer glaciale* (Utrecht: G. Broedelet, 1697), 378–379. Hennepin's companions, Michel Accault (or Ako) and Antoine Auguelle (called Picard Le Guay), were unmoved: they abandoned him in spite of his pleadings, and he was rescued only by the intervention of a Santee warrior chief.

the dangerous foods they were forced to eat in order to avoid starvation in the wilderness: after eating haws (*senelles*), currants (*groseiles*), and other wild berries in desperation, he observed "I am persuaded that without powdered *orviétan*, which we had used to correct bad [or spoiled] foods, we would have run a great risk to our lives."[20] In a later episode while still on the point of starvation, Hennepin explains how he finally stumbled upon a herd of buffalo crossing a river, one of which was killed by his companion. The pair became very sick after eating it, and were again saved "by means of powdered *orviétan*, which had often been a great help to us in our voyage."[21] As such Hennepin explicitly made use of *orviétan* on multiple occasions, with himself, his French companions, and his Santee captors, treating ailments as diverse as dangerous berries, bad meat, and rattlesnake venom.

How did French *orviétan* compare to locally available simples and indigenous cures? Although he credited *orviétan* with saving his own life and that of others on numerous occasions, Hennepin considered it to be inferior to some native simples in the treatment of snakebites. He mentions herbs used by the Illinois "which are far more assured than theriac and *orviétan*,"[22] a development which he credits to their experience in dealing with snakes, which are so common in their country, particularly in rocky areas. Nearer to the core of the French colony in Québec, the surgeon and academician Michel Sarrazin mentions a scenario wherein *orviétan* was privileged over a native plant, known to the Canadians as *l'herbe du serpent à sonnette* (*Botrypus virginanum*, rattlesnake fern)

[20] "Je suis persuadé que sans l'Orviétan en poudre, dont nous nous servions pour corriger la mauvaise nourriture, nous eussions couru grand danger de la vie," Hennepin, *Nouvelle decouverte d'un tres grand pays*, 381.

[21] "…par le moien de l'Orvietan en poudre, qui nous vint souvent à grand secours dans le voyage,"Ibid., 392.

[22] "…dont l'usage est beaucoup plus assuré que celle du Theriaque et de l'Orviétan," Ibid., 220.

which the Iroquois used to combat rattlesnake venom. He describes one native man who took this plant after being bitten on the ankle by a rattlesnake, but was still sufficiently concerned that he ran eight or ten leagues to Sarrazin in order to obtain a more certain cure. He gave the man a few doses of *orviétan* mixed with *eau-de-vie* (alcohol), and also applied some directly to the bite and put a ligature above it. The man survived. The account itself was attached to the sample of the plant Sarrazin sent to Paris, which he suspects was ineffective against rattlesnake venom.[23]

In all of these cases, it seems likely that the *orviétan* was either bought directly by individual French agents like Hennepin, Tonty, and La Salle, or that it was given by their individual backers at court (La Salle once mentions having received the antidote "from friends"), and that it came to be recognized as a valuable remedy against North American poisons through this usage. Possibly as a result of its reputation, *orviétan* seems to have been purchased by a corporate interest to equip one of its expeditions, namely, the newly formed *Compagnie du Nord*, a joint-stock company formed to counter the English Hudson's Bay Company. In 1682 the *Compagnie* had entrusted two veteran fur traders, Pierre-Esprit Radisson and Médard Chouart des Grosseliers, with the project of founding a trading post at the mouth of the Nelson River, a location of vital importance to the North American fur trade for the access it provided to the continental interior. The vast territories surrounding Hudson Bay were disputed between France and England, and although he was serving France in this particular episode, Radisson would switch allegiances between French and English interests throughout his life, and had informed both of the attractiveness of this locale for the fur trade. Shortly before entering the arctic

[23] Bernard Boivin, "La flore du Canada en 1708. Étude et publication d'un manuscrit de Michel Sarrasin et Sébastien Vaillant," *Études littéraires* 10, no. 1–2 (1977): 260.

waters of Hudson Bay, however, Radisson reports that some of his men killed a large white bear (a polar bear), ate its flesh to excess, and became sick to the point of death with headaches and violent evacuations:

> I was forced to make a signal to my brother-in-law [Des Grosseliers, on the other barque] to advise him of this accident and to get help. Orviétan and sweating pulled these poor unfortunates through, but all their skin had peeled off. We have since learned from the Indians [sauvages] that this species of white bear has a venom in its liver that spreads to all of the flesh, and causes similar accidents when eaten.[24]

The local "sauvages" (Inuit or Cree) were well aware of the poisonous nature of polar bear liver,[25] but Radisson and des Grosselier's party learned of this only after the fact. While indigenous knowledge might have spared Radisson and des Grosselier's party, events led them to draw recourse to their supply of *orviétan*, which had likely been part of the "equipment and stocks of food" that the *Compagnie du Nord*, under the direction of the Québec financier Charles Aubert de La Chesnaye, had purchased for the expedition.

*Orviétan*'s transition from a drug that was carried by individual agents for personal use to one which should be part of the general equipment of larger French expeditions is also apparent from a prescriptive text, namely the counsels for future exploratory and colonial expeditions which the Baron de Lahontan offers at the end of his

[24] "Je fus oblige de faire signal à mon beau-frère pour luy donner advis de cet accident afin d'estre secouru. L'orvietan et les sueurs tirerent ces pauvres mal-heureux d'affaire, mais ils ont tous changé de peau, nous ayons apris dépuis par les sauvages que cette especе d'ours blancs a du venin dans le foye qui se communique à toute la chair, et cause de pareils accidents quand on en mange," Germaine Warkentin, ed., *Pierre-Esprit Radisson: The Collected Writings, Volume 2: The Port Nelson Relations, Miscellaneous Writings, and Related Documents* (Montréal and Kingston: McGill-Queen's University Press, 2014), 20.

[25] Without delving too deeply into the fraught territory of retrospective diagnosis, Radisson's men may have been suffering from the toxic effects of Hypervitaminosis A, a condition which produces skin peeling and is associated with eating the livers of polar bear, which contain large amounts of Vitamin A due to their near-exclusive diet of fish-eating carnivores. See K. Rodahl and T. Moore, "The Vitamin A Content and Toxicity of Bear and Seal Liver," *Biochemical Journal* 37, no. 2 (July 1943): 166–68.

1705 *Voyages*.[26] Lahontan, who had himself served in the French army in Canada and explored lands west of Michilimackinac from 1687-1689, advises that any future expeditions should learn from the failures of earlier expeditions, notably those of La Salle, and provides extensive practical advice on how to manage men in the wilderness, where their inclination to rebel is "unrestrained due to their distance from settlements," and on which equipment to bring. In this account, which he calls his "pédagogie de la découverte," he proposed an organized military party of between three and four hundred men, embarked in longboats (*chaloupes*) which can brave the waves of the Great Lakes, and equipped with all the tools and equipment necessary to navigate and build camps, including compass, astrolabe, paper as well as hand mills for grinding corn, nails, pikes, spades, axes, fishhooks, soap, candles, even trumpets and violins (to entertain the troops and the native guests), and trade goods like tobacco, alcohol, scissors and needles. He cautions against bringing ecclesiastics, who he believes weaken the men with superstitions, fears, and timidity, and instead to ensure that men from various trades are found among the company, including carpenters, gunsmiths, sawyers, hunters and fishers by profession, and, of course, surgeons. These surgeons should be "equipped with a full kit, of unguents for wounds, drugs for various illness, but above all, orviétan and senna."[27] In this respect at least, Lahontan's "pédagogie de la découverte" is in agreement with the practice of La Salle, Tonty, and Hennepin, in fact extending it to cover the whole expedition, pointing out that this list of items is based on the one he was provided when

[26] Louis Armand de Lom d'Arce Lahontan, *Nouveaux voyages de Mr. le baron de Lahontan dans l'Amérique Septentrionale* (The Hague: frères l'Honoré, 1703). Lahontan is perhaps best known to posterity as one of the originators of the Enlightenment noble savage figure, in the form of the interlocutor Adario in his later *Dialogues avec un Sauvage* (1704).

[27] Ibid., 257. "…et des Chirurgiens munis d'un étuit complet, d'onguens pour les blessures, de drogues pour les maladies, mais sur tout d'Orviétan et de Sené"

he took command at Michilimackinac.[28] Given the size of the expedition that Lahontan recommends (three to four hundred men) he likely imagined the purchase of a sizable quantity of the drug, which otherwise seems to have made its way to North America primarily through the hands of individual agents, or in Radisson's case, through the *Compagnie du Nord*.

Lahontan's lavish proposals for how to provision exploratory expeditions and build fortified trading posts went unheeded, and there is no evidence that the military ever purchased *orviétan* in bulk, be it in France or in its colonies. This may have more to do with the scale of France's North American operations and the relative lack of interest of metropolitan officials than with the value of the drug for such purposes: until the Seven Years War, French military operations in North America would remain relatively small. The drug's persistent supporting role in North American French expansion nonetheless provides a window into how a proprietary drug, purchased by individual agents, might accumulate a reputation over time that would lead it to be considered an indispensable provision for larger expeditions, like those actually undertaken by Radisson and des Grosseillers in the service of the *Compagnie du Nord*, and those proposed by Lahontan. Moving from North America to the Indian Ocean, the cases of the MEP and the French East Indies Company allow us to see fully realized models of "corporate consumption" in action.

### 2. *Helvétius' Remedies and the Paris Foreign Missions Society in Southeast Asia*

Unlike *orviétan*, Helvétius' remedy did not "go global" by trickling out to French colonies and outposts after a prolonged period of use in France. Rather, it was a "born

[28] Ibid., 258.

global" drug in both supply and demand: Brazilian ipecacuanha, shipped across the Atlantic, was its active ingredient, and Helvétius' finished, compounded drug was almost immediately dispatched abroad from France. Within eight months of having received his privilege on August 23, 1688, Helvétius' dysentery remedy was being requested in bulk quantities to bolster French military and missionary interests on three continents: (1) Louis XIV's War Minister, the Marquis de Louvois, was requesting it for use in France's European armies, then mobilizing for what would become the War of the League of Augsburg (1688–1697);[29] (2) Louis-Hector de Callière, Governor of Montréal, had earmarked it as critical to the medical support of his planned invasion of New York in America (February 1689);[30] and (3) the French navy squadron being dispatched to the Indian Ocean under the command of Abraham Duquesne-Guiton,[31] as well as the Paris Foreign Missions Society. By 1709, when Helvétius proposed the creation of a royal office of Distributor General of Remedies (*Distributeur général de remèdes*), he could brag that, in addition to their widespread dissemination in metropolitan France both to the army and in rural poor relief efforts, his drugs had also been used in Siam, Canada, and China through the MEP.[32]

The cases of Louvois and Callière for the French armies in Europe and Canada fit neatly within the relationship Helvétius built with the military, detailed at length in chapter 4. This section will focus on the supply relationship Helvétius built with a

[29] SHD $A^1$ 811, fol. 6, Louvois to Helvétius (October 18, 1688).

[30] Gabriel Nadeau, "Les remèdes des Helvétius dans la Nouvelle France," *Bulletin de l'Association des médecins de langue française de l'Amérique du Nord / L'Union médicale du Canada* 74, no. 5 (May 1945): 621–35; Pierre-Georges Roy, "Le projet de conquête de la Nouvelle-York de M. de Callières en 1689 (suite)," *Bulletin des recherches historiques* 24, no. 12 (1918): 353–67. See 356-357 for Helvétius' remedy.

[31] AN MARINE $B^2$ 69, fol. 173 (March 13, 1689); Maurice Chiray, "La famille des Helvétius," *Paris médicale* 42 (1921): 3; Lafond, *Dynastie des Helvétius* 46.

[32] See above, ch. 4, sect. 4, and AN $G^7$ 716, Adrien Helvétius, "Placet à M. Desmaretz," fol. 23r°.

different kind of organization, the Paris Foreign Missions Society or MEP, founded in 1663 by Alexandre de Rhodes and active in Southeast Asia in this period.[33] Although not technically a religious order, the MEP was made up primarily of French secular priests who had come to Southeast Asia to establish a traditional episcopal structure and indigenous parish clergy there. The Propaganda Fide, the papal congregation charged with overseeing the spread of Catholicism globally, appointed three Vicars Apostolic to direct the missions in Southeast Asia, all of whom were French and drawn from the MEP rather than the Society of Jesus, marking a challenge to Portuguese Padroado and Jesuit interests. These Apostolic Vicars, including Louis Laneau (whose letter opens this chapter) were also there to assert papal control over the heterogeneous collection of missionaries from various orders and that were already on the ground, including Spanish and Portuguese Franciscans, Dominicans, Augustinians, and of course the Jesuits. The Vicars and the MEP missionaries initially based themselves at Ayutthaya (Siam), where they established a seminary under the protection of King Narai, who favored the French Catholic missionaries and forged diplomatic links with the court of Louis XIV in the 1680s.[34]

How did Helvétius establish a relationship with this relatively new missionary society, so favoured by the Propaganda Fide? In much the same way, it seems, as he had built links with the military: namely, through private practice in élite Parisian circles. The social commentator Bonaventure d'Argonne mentions that one of Helvétius' early

[33] On the MEP in Southeast Asia, the best survey is Forest, *Les missionnaires français au Tonkin et au Siam*, 3vols.; see also Catherine Marin, ed., *La Société des Missions Etrangères de Paris: 350 ans à la rencontre de l'Asie : 1658-2008 : colloque à l'Institut Catholique de Paris (4 et 5 avril 2008)* (Paris: Karthala, 2011). For an older institutional history, see Henri Alexander Chappoulie, *Aux origines d'une église. Rome et les missions d'Indochine au XVIIe siècle*, 2 vols. (Paris: Bloud et Gay, 1943-1948).

[34] Tara Alberts, *Conflict and Conversion: Catholicism in Southeast Asia, 1500-1700* (Oxford: Oxford University Press, 2013), 36–37.

patients was Jacques-Charles Brisacier, Superior of the Foreign Missions Society Seminary, the organization which trained MEP priests. Helvétius may also have attracted attention through his own charitable practice at his residence on the rue Serpente in Paris, where he daily provided free consultations to the destitute, even handing out doses of his remedies. His charitable dispensation of the drug was known to Laneau, the head of the mission in Siam in 1693, as we have already seen. As Bonaventure d'Argonne tells it, La Chaise had Helvétius provide some of his remedy to a ("Père Beize") who was preparing to go on mission, almost certainly the same Père de Bèze who accompanied the Jesuit Guy Tachard on the second French embassy to Siam.[35]

The effects of the drug were so remarkable that La Chaise informed the king, who in turn ordered the Navy Secretary Seignelay and the royal first physician Daquin to organize the 1688 hospital trial.[36] As such, in the chain of patients that referred Helvétius to higher and higher echelons of the French élite, it was in fact Brisacier that brought him to the attention of Père Lachaise, which prompted the hospital trials ordered by Seignelay, intended to determine the utility of the drug for use in the navy, which eventually led to its widespread use in the army at the beginning of the War of the League of Augsburg (1688-1697). In this sense, then, it was the patronage of powerful clerics and missionaries that recommended Helvétius' to the military.

The earliest supply of Helvétius' remedies to reach Southeast Asia likewise show a close link between his military and missionaries connections, in this case with the Jesuits rather than the MEP. The Jesuit Tachard's account of the second French embassy to Siam shows that Helvétius' remedy was already being sent overseas, probably in small

[35] Bonaventure d'Argonne, *Mélanges d'histoire et de littérature recueillis par M. De Vigneul Marville. Nouvelle édition, revûë, corrigée, et augmentée*, vol. 1 (Paris: Claude Prudhomme, 1713), 51.
[36] Ibid., 1:52. See above, ch. 4, sect. 1.

quantities, in 1687, even before the Parisian hospital trials which led to his monopoly privilege.[37] Here some background is useful. Tachard had accompanied the first French embassy to Siam in 1685, but at that time he and the other Jesuits accompanying him had been en route to China. During their time in Ayutthaya, however, they sufficiently impressed the Siamese King Narai, particularly with their astronomical skills, that the king requested a company of Jesuits join the next embassy. Tachard took on the role of Narai's envoy to Louis XIV and to Pope Innocent XI, and so became a figure of considerable importance in relations between Versailles and the court of King Narai.[38] This led to a brief period of intensified relations between Versailles and the Siamese court at Ayutthaya, which was itself looking for a counter-weight to Dutch influence in the region and had become receptive to French overtures through the influence of the prominent courtier and "quasi-minster" Constance Phaulkon, himself a Levantine Greek who sought to profit from French influence in the region for his own ends.[39]

Tachard's account of the 1687 voyage to Siam incorporates a letter from the aforementioned Père Bèze, who Bonaventure d'Argonne describes as having received a supply of Helvétius's drug while preparing to go on mission. The letter describes a climb the Jesuits made up the Table Mountain while the squadron made port at the Dutch colony of Cape Town. While the letter is mainly of interest for its observations on the Khoikhoi (Hottentots) and its comments on the tide markings and seashells up on the

[37] The squadron carrying the embassy sailed March 1, 1687, and Seignelay's orders for the hospital trails are from July of 1687.

[38] Michael Smithies has argued that Tachard was an overactive agent whose actions often frustrated French interests: see Michael Smithies, ed., *Mission Made Impossible: The Second French Embassy to Siam, 1687* (Chiang Mai, Thailand: Silkworm Books, 2002), 1–8; for a more favourable view of Tachard, see Raphaël Vongsuravatana, *Un jésuite à la Cour de Siam* (Paris: Editions France-Empire, 1992); and Michael Smithies reply, "Saint Tachard? A Rejoinder to Vongsuravatana," *Journal of the Siam Society* 82, no. 2 (1994): 175–78.

[39] On Phaulkon see Luang Sitsayamkan, *The Greek Favourite of the King of Siam* (Singapore: Donald Moore Press, 1967).

cliffs (taken as proof that the top of the mountain was once at sea level), Bèze also mentions that several of the Jesuits were already sick by the time of the arrival at the Cape:

> We worked to restore a few of our fathers who had arrived sick [at the Cape], and I made some contribution through the remedies that the Marquis de Seignelay had the goodness to have given to us, and by some specifics that Monsieur Helvétius and the Brother of the Sun [the Duke of Orléans] had put into my hands.[40]

Although nominally an embassy, the 1687 expedition also included a military contingent intended to seize the ports of Mergui and Bangkok, regardless of the outcome of the negotiations. Was the drug among the medical supplies intended to support the military contingent, or was it held by the Jesuits? Bèze's wording suggests the *spécifique* was given directly to him via Helvétius and Philippe II Duke of Orléans (whom Helvétius served as physician in ordinary). The mention of Seignelay, Secretary of the Navy, points in the other direction: it was Seignelay who later ordered the hospital trials, with explicitly military ends in mind, and Seignelay would order a large supply of Helvétius' drug for the Duquesne-Guiton expedition to Siam a few years later, this time explicitly for the soldiers and sailors.[41]

French gains during the 1687 embassy were mixed: a new trade treaty (deemed to be mediocre), but no conversion from Narai, nor any other official support for

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[40] "Nous avions travaillé à rétablir quelques uns de nos Pères qui étoient arrivez malades, et j'y avois un peu contribué par les remedes que M. le Marquis de Seignelay avoit eu la bonté de nous faire donner, et par quelques specifiques (58) que Monsieur Helvetius et le frere du Soleil m'avoient mis entre les mains," Guy Tachard, *Second voyage du pere Tachard et des jesuites envoyez par le roy au royaume de Siam: Contenant diverses remarques d'histoire, de physique, de geographie, et d'astronomie.* (Paris: Daniel Horthemels, 1689), 57–58.

[41] On March 13, 1689, Seignelay requested that Helvétius supply him with enough of his remedy to provide three doses (*prises*) to three hundred patients, as part of the cargo of the ship *L'Oyseau* for Abraham Duquesne-Guiton's expedition to Siam. See AN MARINE $B^2$ 69, fol. 173 (March 13, 1689); Maurice Chiray, "La famille des Helvétius," *Paris médicale* 42 (1921): 3; Lafond, *Dynastie des Helvétius* 46.

Catholicism. In 1688 the growing French influence at Ayutthaya, coupled with the presence of a foreign military force and resentment against Phaulkon, eventually produced a palace coup led by the staunchly anti-French Phetracha, who executed Phaulkon and his allies as well as Narai's heirs apparent, expelled the French, and declared himself king on Narai's death.[42] Although these events marked the end of direct French colonial designs on Southeast Asia until the nineteenth century, the MEP missionaries, who had been in Siam since the 1660s, remained and through them Helvétius' dysentery remedy and later his other drugs came to be distributed in Southeast Asia.

Although the Superior of the MEP seminary was one of the prominent patients that Helvétius treated early in his career (and may stand at or near the root of the connections he forged with the MEP), Helvétius' first formal business dealings with the MEP fathers were not until 1689, after he had secured his monopoly privilege. Their surviving accounts show that by March 1689, Helvétius was already providing them with shipments of his *poudre spécifique*, and that it was destined for Siam.[43] Mention of the

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[42] For a summaries of these events, see David K. Wyatt, *Thailand: A Short History* (New Haven: Yale University Press, 1984), 95–104; and Anthony Reid, *Southeast Asia in the Age of Commerce, 1450-1680*, vol. 2. Expansion and Crisis (New Haven, Conn.: Yale University Press, 1988), 307; for European primary accoutns, see Michael Smithies, ed., *Witnesses to a revolution: Siam, 1688 : twelve key texts describing the events and consequences of the Phetracha coup d'état and the withdrawal of French forces from the country* (Bangkok: Siam Society, 2004); and E. W Hutchinson, ed., *1688 Revolution in Siam: The Memoir of Father de Bèze.* (Hong Kong: University Press, 1968); for debate over the consequences of the 1688 revolution and the supposed isolationism that came in its wake, see Victor B. Lieberman, *Strange Parallels Southeast Asia in Global Context, c 800-1830*, vol. 1, Integration on the Mainland, 2 vols. (Cambridge: Cambridge University Press, 2003): 288–291.

[43] AME 1537, "Recettes et dépenses des missions, 1687-1697," 28. The ledger shows that 225 livres were paid to Helvétius for an unspecified quantity of his dysentery remedy, to be sent to Siam (March 1689). If the drug was sold at the standard price of 3 *louis d'or* (1 *louis* = 3 livres), which seems likely, then the MEP fathers bought 25 boxes (each containing the sixteen alphanumerically labelled packets that make up a full course of treatment, see ch. 4.

Unfortunately no further expense registers exist for the period in question, thus preventing me from charting the purchases of Helvétius' drugs after this point. The missionary correspondence demonstrates however that shipments continued to be sent, particularly to Tonkin and Cochinchina, into the

drug recurs in the missionary correspondence over the following decades, not only in Siam but also in Tonkin and Cochinchina, where the MEP was also very active during this period.

As suggested by comments by Louis Laneau which open this chapter, Helvétius' remedies were an important expense for the MEP. If we compare the price of the drugs purchased in March of 1689 to other medical expenses, we see that the supply of drugs from Helvétius cost more than seven times the two surgeon's kits the MEP had purchased for the Siam mission in the same month.[44] As we have already seen, the price of the drug was particularly high during the early years of Helvétius' monopoly, before he streamlined the regimen instructions and developed the smaller uniform dosage scheme that enabled him to sell it in bulk more cheaply. Reading the printed instructions that accompanied the drug, however, Laneau knew that Helvétius also sometimes dispensed the drug charitably to the poor, and expressed his wishes that this charity should extend to the missions in Siam, and so spare the MEP the expense of purchasing such an expensive drug. Like most of the drug's users, Laneau was almost certainly unaware that its active ingredient, ipecacuanha, was the ground root of a plant which had been collected in Brazil (quite literally on the opposite side of the planet from Siam), which had then been transformed in Helvétius' Parisian lab, and then packaged and boxed with a small set of

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1730s. Some points on search methodology: it being impracticable to go through whole correspondence, I scanned through the (admittedly limited) manuscript finding aids for correspondence from Tonkin, Siam, Canada, Cochinchina, China, and Pondichéry, looking for references to medicine generally and to Helvétius' remedies in particular, or for correspondence from figures I knew were connected to him. The references that did yield results were often brief, couched in paragraphs dealing with other matters, or placed as if by afterthought at the end of letters (e.g. among requests for other materials), and may not have always struck the eye of the archivist as an item worth noting in the descriptions. The results are presented here, in full admission of the fragmentary nature of the picture that emerges from them.

[44] AME 1537, p. 28. The figures are 225 *livres* for Helvétius remedy vs. 32 *livres* for the surgeon's kits to a M. Alet. The only medical expense that exceeds it is 431 *livres* paid to a physician, M. Vincent, for services rendered, probably in Siam. The roughly bi-annual payments to the, M. Alet, never exceed 37 *livres*; he appears to have served as surgeon for the seminarists in Paris.

ancillary drugs and printed instruction sheets, to be sent to Siam by the MEP directors.[45] Ignoring the accumulated expenses in shipping, and the value added by Helvétius' chymical transformation, Laneau could only express his wish that Helvétius might instruct the MEP fathers on how to produce a less expensive, even if "less infallible," substitute that they might compound locally. He acknowledged that this would need to be done without assuming the availability of most common European simples, as in Siam these could only be bought at great expense from European merchants and apothecaries.[46]

As Helvétius found ways to make his drug cheaper and easier to use, Laneau's wish would eventually be fulfilled: we have already seen that, over the course of the 1690s and 1700 it became cheaper and appealed more and more to bulk purchasers, notably the French army and state-funded poor relief efforts. The MEP, which had been purchasing Helvétius' remedies as early as 1689, would also benefit from this transformation. Even in 1693, when a full regime of Helvétius' drug still cost a whopping 5 *louis d'or*, Laneau still felt that the price remedy could be justified, as we have already seen, given the much greater expense of training and transporting missionaries.

Lanneau's ambivalence about the expense of Helvétius remedies would be shared by other missionaries in the coming decades, in spite of both the fact that they became cheaper and that the MEP fathers came to see medicine as a crucial support for their missionary goals. Alain Forest has suggested that the emphasis on medicine through the

[45] For curious readers who have not looked at chapter 4: this mainly involved treating it with a coating to minimize its recognized emetic properties in order to enable its users to better keep it down and benefit fully from the exercise of its other, hitherto unrecognized virtues against flux and dysentery. It was placed in a series of alphanumerically labelled packages which contained mixtures of variable concentrations, along with a series of ancillary drugs, and boxed along with instruction sheets which would guide the patient or the administering practitioner through the drug's regimen.

[46] AME 881 (Siam), 171-172, Lanneau aux directeurs (14 novembre 1693).

establishment of hospices and the distribution of holy water and medication is a peculiar feature of the MEP missions, as contrasted with the Jesuit emphasis on impressing court elites with mathematical and astronomical skill.[47] Recent scholarship however has demonstrated the importance of medicine to the Jesuit mission to China as well.[48] French Jesuits at the court of the Kangxi emperor not only facilitated the exchange of medical knowledge, for instance bringing knowledge of European anatomy to China and Chinese acupuncture to Europe, but also the introduction of therapeutic substances. In addition to the well-known example of cinchona,[49] some of these were even French proprietary medicines: the "pastes medicinales" which Kangxhi dubbed "Chin-yo" and which, according to the account of Jean de Fontaney, were distributed to the poor of France by Louis XIV, may have been the remedies of the state medical supplier, Pierre-Jean-Baptiste Chomel, who as we have already seen, supplied *pastilles* and *onguent divin* alongside Helvétius' shipments to the rural poor in the French provinces.[50] Among the

[47] Forest, *Les missionnaires français au Tonkin et au Siam*, 1:210.

[48] See von Collani, "Mission and Medicine"; Puente-Ballesteros, "Jesuit Medicine in the Kangxi Court." See also Puente-Ballesteros forthcoming monograph, "The Naked Emperor: Jesuit Surgeons, Physicians and Apothecaries in the Service of the Kangxi Court (1662-1722)," in preparation for Brill.

[49] Marta Hanson, "Jesuits and Medicine in the Kangxi Court (1662–1722)," *Pacific Rim Report* 43 (2007): 1–10; Harold J. Cook, "Testing the Effects of Jesuit's Bark in the Chinese Emperor's Court," *Journal of the Royal Society of Medicine* 107, no. 8 (August 1, 2014): 326–27; Puente-Ballesteros, "Jesuit Medicine in the Kangxi Court."

It is of course possible that the Jesuits received one of Robert Talbor or even Helvétius' proprietary preparations of cinchona, which were included in his standard *boëtes*; but it seems more likely that they used raw cinchona and prepared it themselves following a recipe. The text refers to the distribution of cinchona among the poor in France, the rewards given the man who "possessed the secret" (Talbor, see above, ch. 2), describes a pound of cinchona being sent from a Jesuit Father Dolu in Pondichéry, and to instructions on its use printed by order of the king: this could be a reference to Blégny's book disclosing the secret, or to the short printed pamphlets that accompany Helvétius' remedy. My leaning is to the Jesuits using raw cinchona and processing it themselves, possibly following the instructions in Blégny's book, described in chapter 2.

[50] Jean de Fontaney, "Lettre du Pere de Fontaney, Missionnaire de la Compagnie de Jesus à la Chine, au R. Pere de la Chaize de la mesme Compagnie, confesseur du Roy. A Tchou-Chan Port de la Chine dans le Province de Tche-kiam à 18 lieuës de Nimpo, le 15 de Février 1703.," in *Lettres edifiantes et curieuses, ecrites des missions etrangeres, par quelques missionnaires de la Compagnie de Jesus*, vol. 7 (A Paris: Nicolas Le Clerc, 1707), 222–231. See the following link to photographs of this source appended to a

medicines recommended by the Jesuit Joachim Bouvet, which should be carried in medicine chests by missionaries, we find simples and officinal compounds like theriac, Queen of Hungary water, capillary syrups, confection of hyacinth, and bezoar stone, but also *orviétan*, described as "another kind of theriac."[51]

Despite long-standing canon law prohibitions against surgery, care for the sick fit within traditional Catholic pastoral and charitable imperatives from the perspective of the missionaries, and opened a space for proselytization and baptism. Likewise, populations in Southeast Asia, like those in Europe, were accustomed to connecting spiritual with bodily health, and proselytization was also linked with care for the sick in the more locally familiar Buddhist tradition: there was as such little barrier to their perceiving the new missionaries coming from Europe as a variety of healer.[52]

But if missionaries were also to be healers of the body, they needed medicines. Requests for medicines, recipes, and secrets are a persistent feature of the MEP missionary correspondence. In his correspondence from Cochinchina, the missionary Pierre Langlois repeatedly extols the importance of medical work to the mission and in his letters back to the Directors of the Society in Paris asked for "good recipes or secrets that will be easy to execute."[53] He also asked for medical books, often specified titles,[54] and expressed his hope that one of his nephews would come join him in his mission, as he was growing old, and that his nephew might study pharmacy, surgery, or medicine,

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short article by Hal Cook on this episode for the James Lind Library: http://www.jameslindlibrary.org/de-fontaney-f-1703/ (July 14 2015).

On Chomel, see above, ch. 4, sect. 4.

[51] von Collani, "Mission and Medicine," 58–60.

[52] On missionaries as healers in Southeast Asia in this period, see esp. Alberts, *Conflict and Conversion*, 109–119.

[53] AME 726, fol. 277, Langlois to the Directors (February 8, 1699).

[54] AME 713, fol. 132, Langlois to Langlois (August 2, 1698). The books requested include "M. Dubé, Le médecin et chirurgien des pauvres, La Chimie de Glaser ou autre."

"for this will serve him well in working to save souls by healing bodies."[55] Other missionaries likewise wrote of the importance of a supply of both skilled practitioners and medicines in keeping up relations with the "mandarins" and other local elites.[56]

What role did proprietary remedies play in this combined medical and religious economy? The correspondence provides some indicative hints. In 1699 colleague Père Capponi made specific requests for different substances, such as aloe, senna, cream of tartar, and theriac, but also requested a supply of a proprietary drug, *l'onguent divin*, produced by the *médecin du roi* Jean-Baptiste Chomel (1639-1720) and his son Pierre-Jean-Baptiste (1671-1740).[57] We see here that requests for proprietary drugs were mixed with more conventional simples, compounds, and chemical substances. It will be recalled that Chomel's *onguent* and *pastilles* were distributed to the rural poor in the provinces through a system which antedated that of Helvétius and may even have furnished the latter with his distribution model (see chapter 4). The presence of the *onguent* in the missionary correspondence suggests that Chomel was also involved in supplying drugs to the missionaries, and that Helvétius was thus not the only vendor of proprietary remedies that had established a relationship with the MEP in Southeast Asia.

While Helvétius' early shipments to Siam appear only to have contained the dysentery specific, later shipments to Tonkin (northern Vietnam) in the 1720s appear to have been the same as the chests (*boëtes*) sent out the provincial intendants in France, including a full range of drugs with printed instruction sheets. The Tonkin missionary correspondence points to some of the inherent challenges in shipping proprietary drugs

[55] AME 726, fol. 259, Langlois to Langlois (February 8, 1699).

[56] AME 725, fol. 8, Capponi to the Directors (February 10, 1699); AME 737, fol. 240, Capponi to the Directors (May 12, 1692).

[57] AME 725, fol. 7, Capponi to the Directors, 10 February, 1699.

overseas as well as preserving and using them in tropical environments. Père Cordier, writing October 29, 1729, almost forty years after Helvétius' earliest shipments to Southeast Asia, observed that "In our experience the medicines of Helvétius are very good even in this country" and requested that his superiors send more.[58] He observed however a number of material problems with packaging and spoilage: although the dysentery specific apparently travelled well, several of the other powders and pills included in the chests had a tendency to melt or become moist (*humide*) and soak through the paper envelopes that contained them: "When they are wrapped in paper they soak up water and loose their virtues and should instead be kept in small faience pots, sealed with small piece of pine or cork, and with several doubled-over layers of paper [assumedly as a cushion]."[59] The balms and sudorific pastes by contrast had the opposite problem: they would dry out in the heat of the local climate. Cordier made other points which emphasize the difficulties of adapting the drugs in Helvétius' chest to local conditions. These parallel the feedback mechanisms in place in the French provinces, whereby the intendants and their subdelegates would have the substances and quantities in each chest tailored to meet their specific deeds. Cordier advised, for instance, that the alum could be dispensed with as it was easily available at low cost in Tonkin, but requested a common European purgative, senna, be included in the next shipment. Likewise following the practice of the provincial intendants, he offered up a detailed description of specific local medical problems that were not addressed by the box's standard therapeutic armamentarium, in the hopes that Helvétius might devise a new specific: "If Monsieur Helvétius could communicate some remedies to us which would be easy to put into use,

[58] AME 686, fol. 304, Cordier to Briasacier and Tiberge (October 25, 1729).
[59] Ibid.

he would do us a service and could save the lives of many of our Christians."[60] The condition afflicted women after they delivered babies, and struck them so suddenly that the fathers scarcely had time to give them last rites: "Decorum does not permit us to inform ourselves in detail on this disease, but what our Tonkinois usually tell us is that blood comes back up and suffocates them [the mothers] so promptly that in just a few hours they expire."[61] At this point, production of the medicine chests was being overseen by Adrien Helvétius' son Jean-Claude-Adrien, and it is impossible to say whether Cordier's request ever reached him, and the subsequent surviving correspondence makes no further reference to the condition Cordier observed. The request does however demonstrate that, just as they did in France, the immediate consumers and dispensers of the drugs took the time to provide Helvétius with feedback on both their effects and advice on tailoring the content of the shipments to local conditions. Likewise, the description of the local "epidemic conditions" shows that whether they were a Daughter of Charity in Brittany, an intendant in Auvergne, or a missionary Tonkin, the people who received and dispensed Helvetius' drugs did not simply see him as a distant and impersonal purveyor of medical supplies: rather, they conceived of him as a kind of lifeline of medical expertise whom they could contact personally.

Cordier was also not the first to complain about packaging and damage in transport: Lanneau in Siam had brought up similar problems, being particularly vexed by a discordance between the drugs containers—which were unlabeled by the time they reached him—and the references to alphanumeric labels in the accompanying instruction

[60] "Si M. Helvetius pouvoit nous communiquer quelques remedes qui fût facile mettre en usage, il nous rendroit service et sauveroit peut être la vie a bien de nos chrétiens," Ibid.

[61] "La bien sceance ne nous permet pas de nous informer en detail de cette maladie, ce que nos Tonquinois nous dissent ordinairement c'est que le sang remonte et suffoque si promptement qu'en tres peu d'heures elles expirent," Ibid., fol. 306.

sheets. It is possible that the labels had become detached, or the drugs had at some point been repackaged (or even adulterated); either way, he asked the directors to sort this out, until which time "he would not dare to use them."[62]

The MEP missionaries combined bodily healing with their spiritual aims in Southeast Asia, and consistently expressed the need for remedies, both for the preservation of their own health as well as for making inroads with the local populations. Alongside more traditional simples and compounds shipped from Europe, the proprietary drugs of Helvétius as well as his forerunner Chomel helped furnish the missionaries with the means to their medical and ultimately spiritual ends. This linkage of the spiritual and the temporal was not universally seen as fitting for missionaries, however, and at least one missionary, Louis Néez, criticized the mingling of medicine with the religious mission and singled out Helvétius' drugs in particular as an unnecessary expense:

> Mr. Guetti has sent us [...] a box of Helvétius' medicines, which are of little use to us here in Tonkin, where everyone dabbles in medicine except us (as we have other things to do). When we ourselves are sick, we draw recourse to the physicians of the land.[63]

Alongside casting the utility of Helvétius' drugs into doubt, we find here an implicit condemnation of missionary medical practice and unique praise for the indigenous medical tradition as perfectly sufficient to the missionaries' needs. Resources could be better allocated: as the rest of the letter makes clear, Néez felt the directors should send fewer of Helvétius' remedies and more money for them to buy food.

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[62] AME 881, fol. 172, Lanneau to the Directors (November 14, 1699).

[63] AME 655, fol. 367, Néez to Brisacier and Tiberge (December 15, 1721). "M. Guetti nous a fait venir de la côte […] une boëte de medecines de M. Helvetius qui nous sont de peu d'usage icy au Tonquin; ou tout le monde se mêle de medecines excepté nous qui avons autre chose à faire, et quand nous sommes malades nous-mêmes nous avous recours aux medecins du païs."

To summarize, it seems that Helvétius gained the patronage of the MEP in much the same way as he had made inroads with the state: namely, through private practice on high-ranking patients. The case of the Jesuits, the French military, and the MEP demonstrate that the connections Helvétius forged with these "corporate consumers" were derived from the patronage of a small set of actors at the highest levels of the French court and ecclesiastical hierarchy. The evidence I have assembled demonstrates that the MEP recognized dysentery as an important threat to their missions in Southeast Asia, and were willing to pay for Helvétius' drug, even in its most expensive phase. It also shows that there were problems inherent in shipping compounded drugs overseas for use in a radically different climate, and that the drugs' users hoped that their individual feedback, questions, and requests could be relayed by the corporate consumer to the drug's producer, even though there is no evidence that the message ever reached Helvétius in the case of the MEP. Finally, the missionary correspondence shows that Helvétius' drugs played only one role in a broader economy of medical support being provided to the missionaries, one which included at least one other proprietary, Chomel's *onguent*, as well as simples, recipes, and printed books. The mention of Chomel's *onguent* is of particular interest, as it suggests that Helvétius was not alone among proprietary vendors in sending his remedies to the MEP in Southeast Asia, and offers another example of how his operation was paralleled by that of Chomel.[64]

In the case of Helvétius as a producer, the fragmentary state of the archival record prevents us from saying how much business he conducted with the MEP in terms of the volume or regularity of shipments: no receipts or expense records survive past the 1690s, even though the drugs are periodically mentioned in the correspondence between the

[64] See above, ch. 4, sect. 4.

missionaries and the MEP directors in Paris. Nor can we say how regularly his drugs were supplied to Siam, Tonkin and Cochinchina across this rather long period, from the earliest mentions in the 1690s correspondence to later references in the 1720s. While we can assume that the volumes Helvétius was shipping to Southeast Asia were quite small in comparison to the thousands of doses of his *poudre spécifique* that were sent into the army hospitals in Alsace in 1690, not to mention the tens of thousands of doses in medicine chests sent by the French state to the provinces from the 1700s onward, his business with the MEP nonetheless shows that his provision of uniform, pre-packaged drugs had global reach. Beyond Southeast Asia, he also claims to have exported them to MEP missionaries in China (a claim which I have unfortunately been unable to verify, but which is quite plausible), and by 1753, at the end of the French Regime in Canada, they were also being sent to Québec.[65] The evidence permits us to make a number of statements about the global reach of Helvétius' pharmaceutical network, but the lack of actual receipts and accounts allows us to say almost nothing about the relative importance of given channels within it. Fortunately, this is not the case with the Guiller-Lajutais *poudre fébrifuge*, where the accounts have survived as evidence collected during lawsuits over the sharing of profits. They permit us, at least for a few short years, to have a relatively complete picture of their overall pharmaceutical business with different consumers, both individual and corporate.

### 3. *Lajutais' poudre fébrifuge and the French East Indies Company*

We have already seen how Ferdinand de Guiller and his putative successor Pierre Brodin de Lajutais followed the path blazed by Adrien Helvétius in building on their royal monopoly privileges to gain lucrative military supply contracts. Lajutais also

[65] Nadeau, "Les remèdes des Helvétius dans la Nouvelle France," 627.

followed Helvétius in finding other corporate consumers who would buy his drugs in bulk, but rather than extending his operation to supply missionaries, Lajutais appears to have leveraged his personal connections and those of his one-time *agent/associé* Etienne Guerin with the financial world of the General Farm (*Ferme général*), the outsourced tax agency of the French state, to supply the *poudre fébrifuge* to the French East Indies Company (*Compagnie des indes orientales*). As we have already seen in the previous chapter, both men were senior officials at the Mondragon snuff works, which processed tobacco for the Farmer's state tobacco monopoly. This employment had acquainted them not only with the large-scale processing of plant substances that was crucial to the production of large volumes of their *poudre*, but also provided them with connections to the world of "court capitalism" at Versailles.[66]

Despite the lack of documentation surrounding how Lajutais came to supply the Company, the rare survival of his account book and various receipts in the case of the *poudre fébrifuge* allows us to make quantitative statements about the total volume of Lajutais' business in 1735-1736 and the distribution of sales between the Company and other consumers. As the following charts make clear, the vast bulk (over 2/3) of Lajutais' total sales in these years went to the French army, which, as we have already seen, was mobilizing for the War of the Polish Succession. After this, the next largest purchaser by

[66] While the surviving correspondence between Guerin and Lajutais does not include any direct evidence of their negotiations with the Company in the form of an *adjudication de fourniture* (supply contract negotiation), it does demonstrate that their work in Mondragon had put both men in contact with a "M. Dupleix," probably Charles-Claude-Ange Dupleix, one of the Farmers, son of René François, former controller of the East Indies Company and the elder brother of Joseph François Dupleix, governor of Pondichéry and commandant general of the French posts in India. See esp. AN $V^7$ 246 (6), dossier 1, item 1, Guerin to Lajutais (21 June 1732). Incidentally, the mention of Dupleix in this letter pertains to the non-*poudre*-related business which crops up frequently in Guerin's earliest letters to Lajutais. In this particular case, Guerin agitatedly expresses his hope that Lajutais can secure the return of an account book from Dupleix, which, I suspect, pertains to his work in managing the Mondragon *manufacture* and, based on his concern, may have implicated him in some financial malfeasance.

far was the French East Indies Company, receiving over 6,300 *prises* (packaged doses) of the drug in the years 1735-1736. While this pales when compared to the 28,000 *prises* that were supplied to the army, it also exceeds the total retail sales of the drug, both by Lajutais personally and by Blanc, his Parisian agent, which amount to less than 4,000 *prises*.[67] Indeed, retail sales in the traditional urban marketplace sense make up only a small fraction of the overall sales of the *poudre fébrifuge* (see Appendix 3, Figure 15).

How do these figures compare to those of other proprietary medicine vendors from this period? Unfortunately, the extremely limited number of surviving account books from such vendors makes it difficult to know the extent to which this distribution was normal or exceptional. Indeed, the lack of surviving accounts for after the period of Lajutais' lawsuit with Guerin even makes it impossible to know how typical the years 1735-1736 were for his own operation. Chronologically, the nearest point of comparison is furnished by the accounts for Anthony Daffy's elixir and the various Francke Foundation medicines. Both cases show that the export of proprietary drugs, particularly to the British colonies in North America, was far more common than one might expect, and offer an instructive parallel to that of Lajutais or even Helvétius.

As with those of Lajutais, we owe the survival of Daffy's accounts to their being deposited as evidence during disputes over the distribution of profits and legal rights.[68] Daffy shipped an average of 9,000 half-pint bottles of his elixir per year between 1678-

[67] I should remind the reader here that it is impossible to know what portion of this was profit due to the near-total lack of documentation on production costs in the surviving documents (esp. raw simples, other materials, equipment, and labour). While all revenues were disputed between Guerin and Lajutais, expenses played a much smaller part in their legal dispute, and consequently, little evidence on them survives, with the exception of a few expenses on advertising (painted signage and printed pamphlets). On all of this, see above, ch. 5.

[68] David Boyd Haycock and Patrick Wallis, *Quackery and Commerce in Seventeenth-Century London: The Proprietary Medicine Business of Anthony Daffy* (London: Wellcome Trust Centre for the History of Medicine at UCL, 2005), 2.

1693, at a price of 2 shillings 6 pennies per bottle. While a considerable volume was shipped beyond England, most of this was to Daffy's agents in other European countries, such as Scotland, France, Ireland, Holland, and Portugal. Comparatively small quantities reached North America and the West Indies, and only two shipments were sent to the Indian Ocean: one a shipment of 80 half pints shipped to Fort St George, the English East Indies Company's trading post at Madras in 1677; and the other a shipment of 36 half-pints sent to one Caleb Travers of Bombay in 1682.[69] These quantities are in the same ballpark as Helvétius' early shipments to Southeast Asia, at 25 boxes of his dysentery specific, which occurred in roughly the same period (1677 and 1682 for Daffy's shipments to India vs. 1689 for Helvétius' shipments to Southeast Asia), but are dwarfed by the over 6,000 doses sent by Lajutais four decades later, which approaches Daffy's total annual sales in Europe.

The German context provides an even more interesting basis for comparison in the form of what we might call a "corporate producer," namely, the philanthropic Francke Foundations of Halle, recently detailed by Renate Wilson.[70] As we have seen in chapter 4, the standardized medicine chests of the Foundations provide a parallel to those of Helvétius, and were developed at almost the exact same time, ca. 1700-1705.[71] The Foundations financed an orphanage and educational activities through the sale of proprietary drugs, which they distributed not only in the Holy Roman Empire, but also in Russia and across the Atlantic, where they were also distributed through an extensive network of German Pietist clients in Britain's North American colonies, as well as to

[69] Ibid., 145, 195.

[70] Renate Wilson, *Pious Traders in Medicine: A German Pharmaceutical Network in Eighteenth-Century North America* (University Park, Pa.: Pennsylvania State University Press, 2000).

[71] See above, ch. 4, sect. 4.

Pietist missions in the Danish Tranquebar colony in India. In many ways their business stands as an inversion of the Helvétius or Lajutais model: they were a corporate producer that catered to individual consumers, selling primarily to individual clients; whereas Helvétius and Lajutais were individual pharmaceutical entrepreneurs, (employing of course various workers to produce their medications) which they then sold to corporate consumers.[72]

When Lajutais' sales are examined from the point of view of revenue, however, an important drawback of his business with the East Indies Company immediately becomes clear: while he was paid in full for the 600 *prises* he sent to their hospital in Lorient (the Company's metropolitan port in Brittany) he was only paid for half of the much larger shipment of 6,300 *prises* that was dispatched to ten East Indies Company ships bound for their colonies and *comptoirs*. In this case and possibly others, as the similar terms for the antivenereal pills suggest, the risks in such overseas commerce were shouldered by the producers of the drug, not the consumers. According to a note in his accounts, the Company alleged that half of this massive order spoiled aboard ship: "they allege that the greater part of the *poudre fébrifuge* distributed aboard ten ships were found wet and moldy upon arrival at some of their colonies, despite being found well packaged at others, where they were perfectly successful."[73] Spoilage as we have seen was likewise

[72] On a financial level, Wilson provides detailed information on the net profits of the Francke pharmaceuticals over the course of the eighteenth century, but nothing that would enable a comparison to either Helvétius and Lajutais, as my information includes only sales by unit and by revenue, but not profits, which in both cases would require information on production costs, which is unfortunately absent. Wilson is undoubtedly correct, however, that their net profits, which varied between 20,000 and 35,000 *Reichsthaler* per annum, must have put them in the highest tier of European pharmaceutical production in this period. Wilson, *Pious Traders in Medicine*, 90.

[73] AN $V^7$ 246 (6), cotte $3^e$, "Journal en forme de compte que rend le Sr Lajutais au Sr Guerin cy devant son agent, ainsi ordonné par jugement de Mgrs les Commissaires généraux du Conseil," 2. "Elle prétend que la plus grande partie des poudres febrifuge distribuée sur dix vaisseaux se sont trouvées

a problem with Helvetius' remedies sent to Vietnam. Lajutais does not specify how many *prises* this order entailed, but based on his usual pricing it would have been in the order of 6,300. Following the terms of his contract, he shouldered half of the loss: the original 3,150 *livres* due to him from the Company was reduced to 1,181 *livres*.[74] These losses from the perspective of Lajutais may have discouraged him from subsequent dealings with the Company, as we shall see.

How were these drugs distributed by the Company? Most were sent to port hospitals in the network of French posts that dotted the Indian Ocean. Isle de France (Mauritius), Bourbon (Réunion), and Pondichéry all had standing East Indies Company hospitals, the latter two (which will concern this section) dating respectively from 1683 and 1701. These hospitals served the stable company personnel at each *comptoir* (trading post), but also had to contend with regular waves of sick sailors arriving aboard Company ships. Each was equipped with permanent surgeons-major, but only Bourbon had an apothecary, starting in 1735, just a few years prior to the first *poudre fébrifuge* shipments.[75]

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mouillées, et moisies arrivant a quelques unes de leurs Colonies quoy que bien conditionnées dans les autres, ou elles ont eu un parfait success."

[74] Ibid., 1-2: "300 livres reçue comtant de la compagnie des Indes pour vente de 600 prises a l'usage de son hopital d'Orient [Lorient]. De la somme 1,181 livres 5 sols duë par la Compagnie des Indes, provenant de sa reconnoissance de la somme de 3,150 livres qu'elle reduit à moitié, attendu qu'elle prétend que la plus grande partie des poudres febrifuge distribuée sur dix vaisseaux se sont trouvées mouillées, et moisies arrivant a quelques unes de leurs Colonies, quoy que bien conditionnées dans les autres, ou elles on eu un parfait succès. Laquelle moitié estat celle de 1,575 livres sur la quelle est osté le quart que l'arrest du Parlement accorde a Made. Rivoire (?), en ce qu'il est jugé que l'envoy a esté fait par son Canal, il reste la premiere somme de onze cents quatre vingt une livres cinq sols." I am uncertain as to Lajutais's relation with this "Mme. Rivoire," but she appears to have been the channel ("canal") by which the drugs were delivered to the Company. Mention of an *arrêt* from the Parlement suggests that there was a dispute between her and Lajutais, the settlement of which required him to pay her one quarter of his profits.

[75] Yannick Romieux, *De la hune au mortier, ou, L'histoire des compagnies des Indes : leurs apothicaires et leurs remèdes* (Nantes: Editions ACL, 1986), 263, 269; Alfred Bigot, "La médecine française à Pondichéry aux XVIIIe et XIXe siècles," in *Comptes rendus du 91e Congrès national des sociétés savantes, Rennes 1966 : section des sciences* (Paris: Gauthier-Villars, Bibliothèque nationale, 1967), 34.

Lacking apothecaries in the Indian Ocean, the majority of their drugs came from Europe. Many likely originated in the central "Apothicairerie" of the port of Lorient, the metropolitan port of the Company. This "Apothicairerie" was created in 1725 as a cost saving measure, with the company following the French navy in abolishing the traditional practice of contracting *apothicaire-fournisseurs* on an ad hoc basis, instead giving the responsibility to a single apothecary who was charged with producing medicine chests to be used by the surgeons aboard Company ships and in the *comptoirs*.[76] In this sense it was born of much she same frustration with *fournisseurs* as the army's decision to purchase Helvétius' drugs in bulk.[77] But even with this drive to compound medicines centrally and internally within the Company, the letters and inventories of requested drugs sent by the Superior councils of the *comptoirs* demonstrate that the Company relied on proprietary vendors to supply a number of drugs, including Lajutais. It is unclear whether this is the result of the central apothecary's inability to fill orders, the specific nature of the drugs in question (that is, the proprietary *poudre fébrifuge* may have been deemed superior to available officinal alternatives, justifying its purchase), or the inherent drawbacks of not having compounding apothecaries on the ground at the *comptoir* hospitals in the Indian Ocean.

Whatever the precise rationale for the corporate purchase of the *poudre fébrifuge*, in some cases it is possible to follow shipments of these from the port of Lorient all the way to the *comptoirs* in the Indian Ocean. In most cases the references in question are only brief mentions of the drug in official Company correspondence (usually acknowledgements of the receipt of a shipment), or the presence of the drug on lists of

[76] Romieux, *De la hune au mortier*, 129–130; Édouard Guéguen, "Les apothicaires des Compagnies des Indes," *Revue d'histoire de la pharmacie* 58, no. 206 (1970): 150–154.

[77] See above, ch. 4, sect. 3.

requested medications. The most interesting is from the Superior Council at Pondichéry, the central Indian *comptoir* of the French Company.[78] In the fall of 1736, 600 *prises* of the *poudre fébrifuge* were shipped there, and the Directors of the Company charged the Pondichéry Council with the task of evaluating their efficacy, providing explicit instructions on how to do so:

> The good effects here produced by a poudre fébrifuge invented by the Sieur de la Jutais have convinced us to send you two parcels, each containing 300 doses. The printed sheets will instruct you on the drug's qualities, use, operation, and the dosage that should be taken. You will take care as soon as they arrive to inform the surgeon-major to make several trials [*épreuves*] on the sick attacked by several illnesses; you will order him to draw up a memorandum with exact details on the uses he has made of it and the effects that it has produced, which you will submit to us in two certified copies, and in the case that this powder does not have all the success that we would hope it to, you will have him draw up a legal statement [procès-verbal] in the proper form which you will then submit in duplicate, and send back to us aboard the same ships whatever remains of this powder so that it can be returned to the Sieur La Jutais at his requisition and at whose risk we shall let it pass through on your behalf.[79]

The implication of this final sentence is that the efficacy of the drugs was an important condition of the contract: if they were deemed ineffective, a legal account (*procès-verbal*) was to be produced of the assessment of the surgeon major, and the drugs were to be sent back to France and returned to Lajutais, who would shoulder risk of loss on their long

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[78] On medicine at Pondichéry see Bigot, "La médecine française à Pondichéry aux XVIIIe et XIXe siècles." Bigot mentions that Lajutais poudre was among the drugs sent to the hospital there.

[79] Compagnie au Conseil supérieur de Pondichéry (October 30, 1736), in Alfred Martineau, ed., *Correspondance du Conseil supérieur de Pondichéry et de la Compagnie*, vol. 2 (1736–38) (Pondichéry: Sociéte de l'histoire de l'Inde française., 1920), 66–67.

"Les bons effets que l'on débite icy d'une poudre fébrifuge de l'invention du sieur de la Jutais nous ont déterminés à vous en envoyer deux pacquets contenant chacun 300 prises; les imprimés qui y sont vous instruiront de ses qualités, de son usage, de son opération et de la dose qu'il en faut prendre. Vous observerez aussitôt qu'elle vous sera parvenue d'ordonner au chirurgien major d'en faire plusieurs épreuves sur des malades attaqués de diverses maladies; vous lui ordonnerez de dresser un mémoire exactement circonstancié de l'employ qu'il en aura fait et des effets qu'elle aura produits, dont vous nous en remettrés deux copies certifiées, et au cas que cette poudre n'ait point le succès que l'on doit en espérer, vous en ferés dresser un procès-verbal en bonne forme que vous nous remettreés par duplicata et nous renvoyerez par ces mêmes vaisseaux ce qui vous restera de cette poudre pour la rendre au sieur La Jutais à la [sic, "sa"] réquisition et aux risques duquel nous vous la faisons passer."

journey as well. This provision appears not to have been unique: a similar report on another proprietary drug, referred to in the correspondence as the *pillules antivénériennes*, 3,600 of which were sent to Pondichéry aboard the same ship, was also requested.

The response of the Pondichéry Council shows that the *poudre fébrifuge* was not, in fact, deemed by their surgeon-major to be effective. A detailed report by the surgeon-major, Ferrier, was attached to the correspondence but has unfortunately not survived. Based on the Council's summary, the suggestion seems to have been that the drug's inefficacy may be due to differences between the climate of France and India:

> Our surgeons have not found that these powders have the same good effects in India as they do in France. The same is true of the antivenereal pills. We are sending the certificate drawn up by surgeon-major, the Sieur Ferrier, to the Company; the Company will also observe that these drugs did not have any greater success at Mahé.[80]

This response suggests a shipment of the drug was also sent to the French *comptoir* at Mahé on the (opposite) Mallabar coast, possibly with similar instructions to assess its efficacy and report back.[81] This of course raises an interesting question: was Lajutais only paid for half of the shipment of his drug because they "spoiled" aboard ship, or because, based on the assessment of the surgeon majors at Pondichéry, Mahé, and other *comptoirs*, they were deemed to be ineffective? The statements in Lajutais' own accounts point to spoilage, but the two explanations need not be mutually exclusive: we have

[80] Réponse du Conseil Supérieur de Pondichéry au Compagnie (January 2, 1738), in Ibid. "Nos chirurgiens n'ont pas trouvé que cette poudre eut aux Indes les bons effets qu'elle a en France; il en est de même des pilules antivénériennes. Nous envoyons à la Compagnie le certificat qu'en a dressé le sieur Ferrier, chirurgien major; la Compagnie y verra que ces drogues n'ont pas eu plus de succès à Mahé."

[81] This suggests the two posts were communicating regarding the efficacy of the drug, or at least that the Council at Pondichéry received the Mahé correspondence before it was dispatched to France.

already seen Ferdnand de Guiller attribute the failure of his *poudre* during the first trials in 1713 to spoilage en route.

Whatever the relationship between the perceived failure of the *poudre* in Pondichéry and the Company only paying Lajutais for half of the shipment, this episode shows that the Company was a very savvy corporate consumer: provisions surrounding the failure of a drug to function as promised were included in their supply contract, and their orders show close attention to legally documenting such a failure so that it would stand up in the case of a lawsuit. Like the War Office bureaucrats who initiated the distribution of Helvétius drugs in the 1690s, the administrators of the Company was not just throwing money at what seemed to be a quick fix to a large-scale health problem: they wanted documented proof of efficacy from medical personnel on the ground, and were very careful not to be swindled by a wily medical entrepreneur like Lajutais.

The *poudre fébrifuge* crops up from time to time in the official correspondence of some of the other Indian Ocean posts. The Superior Council of Ile Bourbon (modern Réunion) for instance requested a new shipment of the *poudre* and other proprietary drugs in 1741: the Copmany agreed to send them 2,000 *pillules de Chabert*, "but as regards those of Petit, and the *poudre fébrifuge* of Lajutais, we will not send you any." This refusal could be a response to the failure of the drug at Pondichéry and Mahé: the Company may have decided not to contract Lajutais for another supply. As with the initial naval trials of Guiller's version of the drug in the 1710s, it seems that opinion on the efficacy of the drug was mixed.[82]

[82] AD Réunion, C° 86, Directeurs de la Compagnie des Indes au Conseil supérieur à l'Isle de Bourbon (March 25, 1741). This letter has been published in Albert Lougnon, ed., *Correspondance du Conseil supérieur de Bourbon et de la Compagnie des Indes, 23 janvier 1736 - 9 mai 1741*, vol. 3.1 (Saint-Denis, Réunion: Gastron Daudé, 1935), 183 for the reference to the *poudre*; see also Albert Lougnon,

The last site where the *poudre fébrifuge* crops up in this period is the port of Saint-Louis in Sénégal, an important center in the Atlantic slave trade. Lajutais appears to have secured an official copy of a letter from the Superior Council of Sénégal to the East Indies Company, which was later used by his daughters to provide documentation of the drug's long history of use when they worked to renew their father's privilege in 1775.[83] The Council reported, "Our surgeons have employed the poudre fébrifuge which you had the kindness to send us with the last case of remedies to great success; as such we ask you to include them in subsequent cases."[84] The copy of the letter, attested as authentic by the Company syndics, goes on to specify that Lajutais had supplied them with another 1,000 *prises* in November of 1738. Other evidence of the use of the *poudre fébrifuge* in Sénégal a few years later survives in the form of an "État des remèdes qui sont les plus nécessaires au Sénégal," prepared by agents in Saint-Louis for the directors of the Senegal Company (*Compagnie du Sénégal*).[85] The main interest of the Company was in gum (a substance which had a wide variety of commercial uses, most notably in textile dying), and in supplying slaves to France's sugar islands in the Caribbean.[86] The extensive list includes hundreds of drugs in high volumes, with the *poudre fébrifuge* mentioned prominently on the first page. The agents in Senegal requested a total of 800

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*Classement et inventaire du Fonds de la Compagnie des Indes des Archives Départementales de La Réunion. Série C°.* (Nérac: Impr. G. Couderc, 1956), 22.

[83] See above, ch. 5, sect. 4.

[84] ANM SRM 111B d 29, Mémoire et copies des pièces originales, No. 5, Extrait de la lettre du Conseil Superieur du Senegal écrite à la Compagnie des Indes (August 24, 1737). "Nos Chirurgiens ont employé avec succes la poudre fébrifuge que vous avez eu la bonté de faire envoyer avec les derniers caisses de remèdes; ainsy nous vous prions d'en joindre aux nouvelles caisses."

[85] ANOM COL C$^6$ 12, item 16 : État des remèdes qui sont les plus nécessaires au Sénégal, 30 juillet 1742.

[86] On the *Compagnie du Sénégal*, see Kenneth J. Banks, "Financiers, Factors, and French Proprietary Companies in West Africa, 1664-1713," in *Constructing Early Modern Empires: Proprietary Ventures in the Atlantic World, 1500-1750*, ed. Louis H. Roper and Bertrand Van Ruymbeke (Leiden: Brill, 2007), 79–116; and Abdoulaye Ly, *La Compagnie du Sénégal* (Paris; Dakar: Karthala ; Ifan Ch. A. Diop, 1993).

*prises* of the *poudre*, along with large quantities of other drugs (e.g. 20 pounds each of theriac, confection of hyacinth, and alkermes, 25 pounds of capillary syrup, etc.). The "État" was attached to a letter, which includes explanations for many of the items being requested, including various trade goods for the slave trade itself. Among these explanations is the following, likely intended to justify the long list of medicines requested: "We assure you that we have always taken particular care to let no sick blacks embark among the cargoes we send to the American Isles."[87] This suggests that the medications being requested were not only meant for company personnel, but may also have been intended to preserve the health of slaves destined to be sent to plantations in the West Indies.[88]

The case of a standardized proprietary drug like Lajutais' *poudre fébrifuge* being used to treat slaves in Senegal poses an important challenge to the view that proprietary drugs were "branded" luxury or "semi-luxury" products catering to the interests and purchasing power of metropolitan consumers in the urban medical marketplace.[89] While admittedly extreme, it nonetheless fits within the established trends described here and in the preceding two chapters: slaves, like soldiers, sailors, peasants, and even distant converts to Catholicism, all represented collections of people whose health was worth preserving from the perspective of various state and corporate interests, but whose

[87] ANOM COL C$^6$ 12, item 77, Letter to the Compagnie (August 1, 1742), article 26. "Nous pouvons vous assurer Messieurs que nous avons toujours eû une attention particulière à ne laisser embarquer aucun noir malade dans les cargaisons que nous envoyons aux Isles de l'Amérique."

[88] While the medical dimension of slavery in the Caribbean and British North America has seen a great deal of scholarly attention, the medical dimension of the transatlantic slave trade, particularly the metropolitan European and indigenous West African supply of pharmaceuticals, remains understudied. Carolyn Roberts' dissertation in progress, provisionally entitled "Surgeon, Fetish Woman, Apothecary, Slave: The Medical Culture, Labor, and Economy of the British Slave Trade, 1680-1807," promises to fill this lacuna in the case of the British slave trade.

[89] Haycock and Wallis, *Quackery and Commerce*, 2; John Styles, "Product Innovation in Early Modern London," *Past & Present* 168, no. 1 (August 1, 2000): 124–69.

individual conditions and constitutions were either assumed to be basically homogenous (with some allowances in dosage for age and sex), or at the very least, economically and medically impractical to consider seriously. Rather than catering to the burgeoning market of affluent consumers of health care, able to pick and choose from a panoply of available cures in the marketplace, these proprietary drugs were purchased on the behalf of patients with little to no buying power whatsoever as individual consumers, often living in hostile or isolated environments at a considerable distance from the metropolitan marketplace. Their bodies were still the ones that ingested the drugs, of course, but in the economic field of the medical marketplace, their needs were assessed and represented by the corporate consumers who had taken an interest in their collective (rather than individual) health, and so purchased drugs on their behalf.

Following on the success of his initial military contract, Lajutais appears to have found a niche with another corporate consumer for his drugs, namely the French East Indies Company. The surviving accounts of his pharmaceutical enterprise show that, at least in 1735-1736, the volume of his business with the Company was second only to his business with the army, and also outstripped his retail sales by a considerable margin. Despite this, his relationship with the Company appears to have been somewhat mixed: he was only paid for half of what he supplied, owing either to perceived inefficacy of the drug on the ground in the Company's Indian Ocean trading posts, to spoilage en route, or to some combination of both. The Company for its part emerges as a shrewd consumer of pharmaceuticals, and seems to have included a clause on the need for the drug to be deemed effective by its surgeon majors in local port hospitals in order for Lajutais to receive payment in full. In spite of being questioned at some ports, such as Pondichéry

and Mahé, it was seen as effective at others, such as Ile Bourbon and Saint-Louis. The drug also likely played a role in the medical support for the French slave trade in Senegal.

The ambivalent history of the *poudre fébrifuge* in Senegal and the Indian Ocean suggests that metropolitan proprietary drugs played a larger role in the medical economy of European commercial expansion. Indeed, the drugs that one finds mentioned alongside the *poudre* reinforce this claim: one common feature across the sources from Pondichéry, Réunion, and Sénégal is that Lajutais' *poudre fébrifuge* is never the only proprietary drug mentioned in requests for medical supplies: it is always mentioned alongside those of other vendors, such as Auguste Belloste's mercurial pills or Mrs. Stephen's pills for the stone.[90] These drugs are of course often listed alongside simples such as senna and some standard officinal compounds like theriac, but the presence of so many proprietaries suggests that the foundations of a global trade in proprietary drugs were already in place by the 1730s, and that this trade occurred primarily (at least in the French case) with corporate, rather than individual, consumers.

*4. Conclusion*

The trade in proprietary pharmaceuticals to French "corporate consumers" in the Indian Ocean has gone wholly unnoticed by the existing historiography of medicine, which when treating proprietary drugs, has tended to focus on metropolitan advertising and regulation.[91] Although the evidence I have assembled is suggestive, it is also important to acknowledge some of the limitations of this chapter's foray outside of

[90] On these vendors, see Pascal Clair and Jean-Marie Le Minor, "Augustin Belloste (1654-1730), de la chirurgie militaire à la thérapeutique mercurielle," *Revue d'histoire de la pharmacie* 89, no. 331 (2001): 369–80; Arthur J. Viseltear, "Joanna Stephens and the Eighteenth Century Lithontriptics; a Misplaced Chapter in the History of Therapeutics," *Bulletin of the History of Medicine* 42, no. 3 (1968): 199–220. Following an extensive series of medical tests, in 1740 Joanna Stephens was awarded £5,000 by the British state to disclose her cure for bladder stones.

[91] Haycock and Wallis, *Quackery and Commerce*, 1–2.

metropolitan France. To begin, while I have been able to follow the three drugs detailed in this dissertation out into the wider world, a more exhaustive study of the supply of all medicines to the East Indies Company, as well as medical references in the correspondence of the MEP, would be required to make a more definitive case for the prominence of proprietary drugs at French outposts on the Indian Ocean. Comparisons to other corporate actors, for example other missionary orders like the Jesuits, and the trading companies of other European powers, would also be needed to establish whether (or to what degree) the large-scale supply of proprietary drugs overseas may be a French peculiarity. In some ways, these corporate purchasers, with their relatively intact archives, may provide better documentation for overseas circulation of medicines than environments which depended more on private retail and wholesale trade: as Renate Wilson has demonstrated, focusing on the British colonies in North America, medicines, even in substantial quantities, could go "under the radar" of customs, the most systematic type of record that could provide a window onto their trade. Such records are often fragmentary even for large-scale staples and commodities, and medicines, which required comparably little space and were difficult to price in declarations, were often carried privately, undeclared, or even smuggled.[92] As such, historians should guard against the potential "survival bias" that likely exists in the documentation, with private trade being less likely to be documented than the varieties of "corporate consumption" described here.

On the whole, however, I maintain that the task of building a clearer picture of "corporate consumption" in pharmaceuticals, as well as the "state consumption" met by entrepreneurs who supplied pharmaceuticals in bulk to the military, both offer rich

[92] Wilson, "Trading in Drugs through Philadelphia," 355–356.

avenues for research on late seventeenth- and early-eighteenth-century medicine, one which my dissertation has only begun to explore. On the level of the broader history of pharmaceutical monopolies in this period, it seems probable that Helvétius, Lajutais, and the Francke Foundations stood in an intermediate position between what we might call "private monopolists" who sold their proprietaries to retailers, and the even larger state medical monopolies (Daffy provides an instructive example), on the one hand, and the great state monopolies over medicinal simples of the later eighteenth century on the other, namely the Spanish state monopoly on cinchona, and the Russian state monopoly on Chinese rhubarb, which in their scope and aim to monopolize all sale and production of a plant within a given territory, may in fact be more comparable to the tobacco monopolies organized by various early modern states in the same period.[93]

Beyond the ambit of the history of pharmacy, it also bears mention that corporate or institutional consumers of all kinds have long been overlooked in the history of consumption, which tends to focus on the social, cultural, and economic dimensions of private acts of purchase in the marketplace.[94] This is certainly the case with much of the history of early modern medicine, in which the model of a "medical marketplace" where individual patients had a wide variety of options of recourse to different types of practitioner, is still dominant. Like much of the historiography of consumption, this

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[93] On the Spanish cinchona monopoly in the later eighteenth century, see Matthew James Crawford, "Empire's Experts : The Politics of Knowledge in Spain's Royal Monopoly of Quina (1751-1808)" (Dissertation, University of California, San Diego, 2009); on the Russian state monopoly on Chinese rhubarb, see Erika Monahan, "Locating Rhubarb: Early Modernity's Relevant Obscurity," in *Early Modern Things: Objects and Their Histories, 1500-1800*, ed. Paula Findlen (New York: Routledge, 2012); Clifford M. Foust, *Rhubarb: The Wondrous Drug* (Princeton: Princeton University Press, 1992), 46–78.

[94] This point has been made by Frank Trentmann, "Introduction," in *The Oxford Handbook of the History of Consumption* (Oxford: Oxford University Press, 2012), 16: "Consumption today is so widely associated with the private act of purchase in the market that it is easy to forget that huge chunks have been public (and in many ways continue to be)—in public hospitals, armies, schools, subsidized university canteens and kindergartens. Companies an institutions, similarly, are spaces of consumption as well as work."

model implicitly assumes individual actors in a marketplace setting. It has been recently challenged on several grounds, notably by Patrick Wallis and Mark Jenner, who have pointed to its multitude of meanings and consequent vagueness as an analytical category as well as its seemingly paradoxical tendency to obscure the economy of medicine: more often than not it is simply used as a synonym for medical pluralism, wherein a wide variety of different healers exist (and compete) in a context where the influence of regulatory authorities are non-hegemonic. In this usage, it implicitly stands as an early modern counterpoint to a regulated, professionalized medicine identified as a feature of medical modernity.[95] The medical marketplace model has also been criticized for obscuring or marginalizing other forms of healing which occur outside of the transactional nexus and marketplace competition or which served as a mediator between a patient and the market, most notably domestic and communal health care, which are assumed to fall to the wayside in the face of a commercializing medical marketplace,[96] and are often relegated to the position of "first port of call" in the so-called "hierarchy of resort" (with the implicit assumption that they could only serve as a prelude to more "serious" or important acts of private or household medical consumption in the

[95] Mark S. R Jenner and Patrick Wallis, "The Medical Marketplace," in *Medicine and the Market in England and Its Colonies, c.1450-c.1850* (New York: Palgrave Macmillan, 2007), 1–23. On the "pluralistic diversity" of practitioners as the "dominant usage" of the term see page 4; on its status as an "underspecified counterpoint to domestic and professionalized medicine," see page 6. Jenner and Wallis also point to the potentially misleading "Friedmanite echoes" of using free market language to describe early modern medicine, which of course was strongly influenced by regulation (and in which, I would add, monopolies could be pervasive) (p. 13), while acknowledging its utility in escaping narratives which projected normative views of profession, ethics, and authority into the past (p. 3), and emphasizes the patient's agency as a consumer of health care. They also point to its continued value in current historiography, particularly if it moves beyond mere "linguistic nods" to the economy of health with an attention to the "ethical and political dimensions of using this kind of language" (p.7).

[96] Ibid., 5.

marketplace).[97] At the opposite end of the scale, in this chapter I have sought to illustrate some of the ways the individualistic focus of the marketplace also fails to encompass certain large-scale transactions which, by the eighteenth century, were playing an increasingly important role in the circulation of therapeutic substances.

The historiography on proprietary drugs is predicated on a similar assumption, namely that such drugs were objects of private consumption. With their flashy print advertising and prominent branding, many were undoubtedly targeted to a marketplace consumer, particularly in England from the Regency onward, as the recent work of Patrick Wallis and John Styles has illustrated.[98] This tendency toward individual consumption is also apparent in France toward the end of the eighteenth century, as Colin Jones has shown.[99] My contention here is that there was also another kind of proprietary vendor, one that targeted a corporate, rather than individual, consumer, which became prominent in the decades between 1680 and 1720. Given the close links many of these vendors cultivated with the French state, which was undoubtedly their largest customer, this phenomenon may be tied to the peculiar conditions of absolutism, and the monopolistic privileges which characterized the "court capitalism" of Old Regime France.

Even when these proprietary drugs would have been expensive goods for the individual urban consumer, in bulk quantities they could still fall within the purchasing range of corporate consumers. Further, the claims to uniformity and consistency of

[97] For counter-examples to the relegation of domestic and communal medicine as a mere "first port of call," see Seth Stein LeJacq, "The Bounds of Domestic Healing: Medical Recipes, Storytelling and Surgery in Early Modern England," *Social History of Medicine* 26, no. 3 (August 1, 2013): 451–68.

[98] Haycock and Wallis, *Quackery and Commerce*; Styles, "Product Innovation in Early Modern London."

[99] Colin Jones, "The Great Chain of Buying: Medical Advertisement, the Bourgeois Public Sphere, and the Origins of the French Revolution," *The American Historical Review* 101, no. 1 (February 1, 1996): 13–40.

product made by such proprietaries were perhaps even more important to the interests of corporate consumers—who wanted a stable therapeutic substance that would work consistently across large numbers of individuals wherever they happened to be—than they were to individual consumers. Harold J. Cook has suggested that the mechanisms of a proto-capitalist marketplace in the eighteenth century encouraged producers to offer a recognizable, uniform product, preferably a medicinal specific that could appeal to any individual consumer suffering from a defined pathological condition. In his view, these market forces tended toward a de-individualization of the human body.[100] While Cook acknowledges the role of state-sponsored experimentation on military populations as an important part of this phenomenon, this role stops at the "research and development" phase, after which time we return to a more conventional view of the medical marketplace.[101] Cook is obviously correct when he observes that "moving from considerations of the body individual to the body universal had advantages in the medical marketplace," but this chapter shows that such advantages served vendors not only in accessing individual consumers, but also corporate ones.[102] In this way, de-individualization was also propelled by the new, population-scale needs of the military and long-distance corporations. In their medical needs and interests, corporations bear important similarities with the military organizations discussed in the previous chapters: all were interested in finding effective, consistent solutions to health problems for their specific populations—be they missionaries or converts, sailors or slaves—in order to better attain their overall aims.

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[100] Harold J. Cook, "Markets and Cultures: Medical Specifics and the Reconfiguration of the Body in Early Modern Europe," *Transactions of the Royal Historical Society* 21 (2011): 123–45.

[101] Ibid., 141–143.

[102] Ibid., 124.

# Conclusion

This dissertation demonstrates that prototypes of large-scale pharmaceutical production can be found in France in the years 1680–1735. The centralizing state of Louis XIV played an important role in fostering this development, first serving as guarantor of monopolies through royal privileges, and then serving as a bulk consumer of the drugs it had so licensed. Two broader trends converged to produce this development: the first is the import of exotic medicinal plants to Europe, the most notable being two South American plants, cinchona and ipecacuanha. The second trend was the decline of Galenic pharmacy and the growing prominence of chymical medicine, which exercised an important influence in two related ways: through developments in practical pharmacy (drying, grinding, infusion, and distillation), and through the reelaboration of the concept of medicinal specifics, a potentiality which had been latent within the Western medical tradition since the time of Avicenna. These trends were capitalized upon by a new class of pharmaceutical entrepreneurs who transformed medicinal specifics from objects of knowledge into globally circulating proprietary drugs. In addition to being consumed by soldiers, sailors, and peasants in metropolitan France, these drugs were also distributed throughout the world by French mercantile and missionary endeavors.

These findings demand a reevaluation of existing historical models of medical practice in the early modern period. In the first place, they challenge core-periphery models, which tend to privilege the perspective of a medically orthodox learned élite by placing it at the "core" while consigning chymical physicians, empirics, charlatans, and "popular medicine" to the margins. It is an old truism that historians tell us about the past, but also about their own present. Such models are historiographic offshoots of the

professionalization process itself, and the tendency of the medical professionals of the nineteenth and twentieth century to see their own reflection in the learned physicians of the past. Historians who lean toward the underdog or popular culture can of course reverse the valence of this relation by affirming the dignity of the (supposedly) marginalized. This rescues the medical "fringe" from "the enormous condescension of posterity," but leaves the essential binary intact. As I have argued here, the Faculties and colleges were not always successful in seizing regulatory authority from the municipal and royal government, and quite far from being marginalized, an important subset of particularly entrepreneurial "empirics" walked the corridors of power at Versailles, were closely entwined with the bureaucracy of the central state, and saw the learned physicians less as threats or rivals and more as potential allies against their real competitors—rival entrepreneurs.

The notion of a "medical marketplace" has often been invoked to challenge core-periphery models. In the medical marketplace, we are told, early modern patients had a wide range of choice among various kinds of medical practitioners and could take their custom wherever they liked. We find two broad variants of this model: the first privileges the agency of the patient, the second stresses competition between rival practitioners or groups of practitioners. Here too we hear echoes of the historian's present: the first view, centered on the concept of patient agency, bears a more than passing resemblance to the consumer movement and advocacy of patient-centered care; the second, where competition is stressed, consciously or unconsciously evokes the neoliberal rhetoric of the "free market."[1]

[1] I draw here on the excellent review of Mark S.R. Jenner and Patrick Wallis, who have likewise pointed out the potentially misleading "Friedmanite echoes" of using free market language to describe early

Physician-dominated medical regulation was far from hegemonic, where it existed at all, and there can be little doubt that early modern patients had access to a plurality of different health-care solutions. But this does not mean that the playing field was even. Far from being a sphere of "free" competition, the Ancien Régime medical marketplace was structured by monopoly, privilege, and differing sources of legitimation, most of which remained tied to kinship or highly personal patronage relations. In Ancien Régime France, the last word on medical regulation was not in the hands of the Faculty. Rather, it was a prerogative of senior state officials like Louvois, Seignelay, and Pontchartrain, who held the reins of power and were perfectly willing to collaborate with empirics to cover the medical dimensions of their larger projects. The state, then as now, could choose winners in the marketplace: it could provide entrepreneurs with a protected market and even serve as the principal consumer of their products.

By both complementing and challenging existing accounts of a pluralistic, predominately urban medical marketplace of private consumption, my research points to the unrecognized importance of state-sponsored monopolies and globally-active corporate consumers in early modern medicine. The state and other corporate actors could in fact serve as intermediaries for patients who lacked individual access to the medical marketplace by purchasing remedies in bulk on their behalf. The standardized medicine chests of Helvétius and the packets of Guiller's *poudre fébrifuge* were a new kind of pharmaceutical resource for socially disadvantaged but numerically significant patient populations: peasants of the French provinces, sailors aboard French East India Company ships, and inmates of the French army's campaign hospitals. Further, in the

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modern medicine: Mark S. R Jenner and Patrick Wallis, "The Medical Marketplace," in *Medicine and the Market in England and Its Colonies, c.1450-c.1850* (New York: Palgrave Macmillan, 2007), 13.

hands of missionaries, explorers, and slave traders, these medicine chests even entered the medical worlds of Southeast Asia, North America, and Africa.

Pharmaceutical monopolies could be highly lucrative in these contexts, but they were also inherently fragile, as my research results demonstrate. Medical secrets could be counterfeited, stolen, or reverse-engineered by rivals. While a monopoly privilege provided legal grounds for prosecuting competitors, actual litigation in the courts could be costly and time-consuming. Medical secrets could also be disclosed to the public: this might be planned, as in the case of Robert Talbor, whose secret was purchased by Louis XIV but revealed only posthumously. But their divulgation might also take the form of a kind of "genericide," as happened when the Contugi family faced the challenge posed by the inclusion of *orviétan* recipes in the pharmacopoeias. Rival vendors and apothecaries could then argue that the preparation of the drug was public knowledge, and that they had the right to produce their own versions of it, which forced the Contugi family to re-formulate its privilege as a defense of a trade-mark and exclusive point of sale, as we have seen.

Moreover, the survival of a monopoly across multiple generations was subject to numerous pitfalls. Breaks in the transmission of a privilege or the medical secret on which it was based could present serious challenges to would-be inheritors. As Jean Verdier pointed out, many useful medical secrets failed to enrich medicine, sinking into oblivion after the death of their authors, who had not transmitted them to future generations.[2] The secret of Guiller's *poudre fébrifuge* was almost lost in this way, and was only recovered through the considerable efforts of Lajutais and Guerin. Privileges

[2] Jean Verdier, *La jurisprudence de la medicine en France* (Alençon: Malassis le jeune, 1762), 154.

and secrets alike were also vulnerable to "succession crises" in which a medical "dynasty"—like a royal dynasty—faced the uncertainties of a possible break in the transmission of the monopoly. The fact that most secrets and privileges were transmitted bilaterally—that is, through both men and women—did give them some degree of flexibility. We have seen that the "succession crises" of the Contugi and Guiller-Lajutais monopolies produced a variety of familial arrangements, which put the privilege in the hands of mothers, widows, and sisters. Similar cases existed in other monopolies, for example the *gouttes* of General La Motte, which were sold for decades by his widow.[3] Although it was not possible to explore this subject in detail here, a closer study of the role of women in these monopolies and a comparison to their role in the craft guilds would make an important contribution to the history of women's medical work in the early modern period.[4] In addition to these problems of transmission, it should also be remembered that monopoly rights did not in themselves guarantee the sales or the popularity of the drug. The best perspective of profit in the world of secret remedies was to supplement a monopoly privilege with the acquisition of a government supply contract. It is no accident that the most extensive monopoly here described, that of Helvétius *père et fils*, was also the most thoroughly integrated with the structures of the fiscal-military state. Fortunately for would-be monopolists, the source of both

[3] See above, ch. 1, sect. 5

[4] The cases of the Grimaldi electuary in Bologna and the Colochi plague remedy in Venice provide comparable cases demonstrating the prominent of women in multi-generational monopolies. On the Grimaldi electuary, see David Gentilcore, *Medical Charlatanism in Early Modern Italy* (Oxford: Oxford University Press, 2006), 66–78; and Gianna Pomata, "Practicing between Earth and Heaven: Women Healers in Seventeenth-Century Bologna," *Dynamis* 19 (1999): 119–43. On the Colochi plague remedy, see Jane Stevens Crawshaw, "Families, Medical Secrets and Public Health in Early Modern Venice," *Renaissance Studies* 28, no. 4 (2014): 597–618. For surveys of the history of women's medical work, see Leigh Whaley, *Women and the Practice of Medical Care in Early Modern Europe, 1400-1800* (Houndmills: Palgrave Macmillan, 2011); Susan Broomhall, *Women's Medical Work in Early Modern France* (Manchester: Manchester University Press, 2004).

monopolies and contracts was the same: the royal court. The detailed case of Guerin's negotiations at Versailles in 1733 demonstrates how closely intertwined those negotiations could be.

Another question that emerges from this dissertation is the applicability of the concept of proto-industrialization to early modern pharmaceutical production. "Proto-industrialization"was originally linked to developmental models aimed at explaining a "first step" in European industrialization and the transition to modern capitalism. Today, historians use it less schematically to describe various forms of expansion in domestic industries that did not centralize in factories and produced goods for export markets rather than local consumption. It is often but not always linked to rural settings beyond the pale of urban craft guild regulations.[5]

Could the monopolies of the Contugi, Helvétius, and Guiller-Lajutais families be seen as pharmaceutical proto-industries? The scale of their operations itself poses the question. Although quantitative data on the Contugi *orviétan* monopoly are lacking, this dissertation shows that Adrien Helvétius sold an average of over 50,000 *prises* (individually packaged doses) of his various proprietary remedies to the French state annually in the 1710s, a figure which doubled by the 1720s to reach 100,000 *prises*. Similarly, in 1735 alone, Pierre Brodin de Lajutais sold almost 40,000 *prises* of his *poudre fébrifuge* to the army, the navy, and the French East Indies Company.[6] These levels of pharmaceutical production were quite high for this period and were likely

[5] For an excellent introduction, see Sheilagh C. Ogilvie and Markus Cerman, *European Proto-Industrialization: An Introductory Handbook* (Cambridge: Cambridge University Press, 1996); the concept was first introduced by Franklin F. Mendels, "Proto-Industrialization: The First Phase of the Industrialization Process," *The Journal of Economic History* 32, no. 01 (March 1972): 241–61.

[6] In the 1720s, "Helvétius père et fils" were being paid over 30,000 *livres* annually by the Controller General of Finances, and in 1735 Lajutais's revenue exceeded 14,000 *livres*, 10,000 of which came directly from the coffers of the *Extraordinaire des guerres*. See above, ch. 4, sect. 5, and ch. 5, sect. 4.

matched by only a handful of other producers elsewhere in Europe, most notably the Francke Foundations of Halle.[7]

The three monopolies I have described share some features with the proto-industrialization model. They emerged from domestic settings but expanded to meet demand in export markets. They managed to escape guild regulation, which gave them a free hand to innovate. Unfortunately, very little detail has survived on their actual production processes. We can say almost nothing about the Contugi or Helvétius laboratories or labor, although we do know that Guiller and later Guerin and Lajutais based their own operation in Champigny and Vincennes, respectively, both of which were beyond the walls of Paris. We also know that Guiller employed children to peel the skin from the tithymal that formed the key ingredient of his *poudre fébrifuge*, and that Guerin and Lajutais employed a group of herb gatherers to collect the plant on their behalf. We know that Guiller had a chymical furnace in his home, and that Guerin and Lajutais fought one another over the ownership of chymical equipment used in the production of the *poudre*, as well as other items which are harder to categorize, including "two big wooden machines lined with tin and four copper rollers."[8] It also goes without saying that the ingredients of their drug had to be processed, compounded, and packaged in paper envelopes with printed instructions sheets. These details are suggestive, and, coupled with the large production figures numbering in the tens of thousands, they point in the direction of a proto-industry. Helvétius' operation is even more obscure, but based on its variety and total output—which reached 100,000 packaged doses per year—was

[7] Renate Wilson, *Pious Traders in Medicine: A German Pharmaceutical Network in Eighteenth-Century North America* (University Park, Pa.: Pennsylvania State University Press, 2000).

[8] "Deux grandes machines de bois doubles de fer blanc et quatre roulettes de cuivre" AN $V^7$ 246 (6), dossier 2, "Compte de recette et dépense que rend le S. Guerin au S. de Lajutais,"18r-v.

likely even more complex than that of the *poudre fébrifuge*. Sources may yet emerge which could shed more light on production practices, which could then be compared to the more customized and locally-oriented craft production prevalent among urban apothecaries.

The question of whether these monopolies constituted a pharmaceutical proto-industry is closely tied to a woefully neglected subject in the history of military medicine: namely, the critical role played by pharmacy in the support of the ever growing armies and navies of early modern Europe. Pharmacy and drugs are mostly ignored in most surveys of the history of army medicine, which focus overwhelmingly on surgeons, surgery, hospital organization, and the "proto-public health" of hygiene, nutrition, and preventative medicine. The link between wartime needs and pharmaceutical developments has long been clear to historians of the nineteenth-century American pharmaceutical industry, who have often pointed to military spending during the American Civil War (1861-1865) as a watershed in the development of the industry, although relatively few detailed studies exist.[9] Somewhat closer to the period in question, Erica Charters has recently pointed to the role of medical trials organized by the Sick and Hurt Board of the Royal Navy during the Seven Years' War (1754-1763) in response to the problem of scurvy.[10] The cases outlined in my dissertation show that much the same is true of the later seventeenth century and the first decades of the eighteenth. In spite of

[9] Michael A Flannery, *Civil War Pharmacy: A History of Drugs, Drug Supply and Provision, and Therapeutics for the Union and Confederacy* (New York: Pharmaceutical Products Press, 2004); George Winston Smith, *Medicines for the Union Army: The United States Army Laboratories during the Civil War* (New York: Pharmaceutical Products Press, 2001); Jonathan Liebenau, *Medical Science and Medical Industry: The Formation of the American Pharmaceutical Industry* (Baltimore: Johns Hopkins University Press, 1987), 17–20; Edward Kremers and George Urdang, *Kremers and Urdang's History of Pharmacy*, ed. Glenn Sonnedecker, 4th ed (Philadelphia: Lippincott, 1976), 327–329.

[10] Erica Charters, *Disease, War, and the Imperial State: The Welfare of the British Armed Forces during the Seven Years' War* (Chicago: University of Chicago Press, 2014), chaps. 4, 120–141.

the absence of testing-oriented bureaucratic structures like those which Charters highlights, French officials at the highest levels of military administration—most notably the War Secretary Louvois and the Navy Secretary Pontchatrain—were keenly interested in finding drugs that could solve strategic medical problems like intermittent fevers and dysentery. Lower-ranking officials, notably the clerks (*commis*) of the *Bureau de Guerre*, were also strongly aware of corruption and inefficiencies with the existing practices of out-contracting, and tried to develop alternatives. It is to be hoped that medical *entrepreneurs-fournisseurs* will attract some interest in the wider renewal of scholarship around the role of out-contracting in the rise of the fiscal-military state.[11]

The widespread popularization of medicinal specifics described in my dissertation is also part of a longer lineage of "mass medicine," and the development of de-individualized therapies, which took on a particular importance in the eighteenth century. Later episodes in the eighteenth-century history of "mass medicine" likewise point to the importance of "empirics" and familial monopolies. Take for example the case of smallpox inoculation, first pioneered for large-scale use in England around 1760 by a dynasty of inoculators, Robert (1708-1788) and Daniel Sutton (1735-1819).[12] We already know that empirics and entrepreneurs played an important role in English army and navy medicine.[13] A greater attention to such apparently peripheral figures, and an assessment

[11] Once again, for an excellent review of the state of research on this question, see Jeff Fynn-Paul, Marjolein 't Hart, and Griet Vermeesch, "Entrepreneurs, Military Supply, and State Formation in the Late Medieval and Early Modern Periods: New Directions," in *War, Entrepreneurs, and the State in Europe and the Mediterranean, 1300-1800*, ed. Jeff Fynn-Paul (Leiden: Brill, 2014), 1–12.

[12] John Robert Smith, *The Speckled Monster: Smallpox in England, 1670-1970, with Particular Reference to Essex* (Chelmsford: Essex Record Office, 1987), esp. ch. 4, "The impact of Daniel Sutton."

[13] Harold J. Cook, "Practical Medicine and the British Armed Forces after the 'Glorious Revolution,'" *Medical History* 34, no. 1 (1990): 1–26; Harold J. Cook, "Sir John Colbatch and Augustan Medicine: Experimentalism, Character and Entrepreneurialism," *Annals of Science* 47, no. 5 (1990): 475–505.

of their differences and similarities across time and place, has the potential to reorient the history of therapeutic innovation and "mass medicine" in the early modern period.

This history also extends back in time: "mass medicine" has of course existed in one form or another since antiquity. The Roman encyclopedist Cornelius Celsus, for example, pointed out that an appreciation for the peculiarity of individual constitutions was impractical when treating large numbers of patients. In such circumstances it was better to do as the empirics did, and look for common characteristics, in the same way as one would when dealing with soldiers, slaves, or livestock.[14] At the end of the seventeenth century, the medical needs of large numbers of soldiers, sailors, missionaries, and peasants came to be recognized as a problem by the state and other corporate bodies. The élites at the head of these institutions turned to their own practitioners for solutions—most notably the physicians of the court—and these physicians brokered relationships between empirics and the state.

Does this mean that the popularization of medicinal specifics was simply a consequence of these new demands? Harold J. Cook has posed this question in a provocative article on medicinal specifics. In it he argues that the rise of specifics was a result of "a decline of learned medicine due to market forces, which created commonalities among consumers."[15] While prudently cautioning against economic reductionism, Cook stresses the importance of the arrival of new therapeutic substances in Europe and their subsequent commodification within a consumer marketplace.[16] But though he points to the importance of large-scale trials on military populations, Cook

[14] Celsus, *De medicina*, trans. W.G. Spencer, Loeb Classical Library (London: W. Heinemann Ltd., 1935), 1.17–18.

[15] Harold J. Cook, "Markets and Cultures: Medical Specifics and the Reconfiguration of the Body in Early Modern Europe," *Transactions of the Royal Historical Society* 21 (2011): 143.

[16] Ibid., 129–130.

does not view the military itself as a market player, focusing instead on the marketplace of individual consumers.[17] I would argue, in contrast, that the fiscal-military state played a critical role at every stage: not just at the level of the testing and licensing of drugs, but also fundamentally in their consumption.

In addition to highlighting the critical role of the fiscal-military state, I have also suggested that intellectual developments played a key role in the emergence of medicinal specifics. There can be little doubt that medicinal specifics contributed to the decline of what Owsei Temkin called "physiological" views of disease implicit within the humoral theory of orthodox Galenism, and that this occurred alongside the rise of the more "ontological" views of disease promoted by Paracelsus and especially Van Helmont.[18] A full appreciation of these intellectual developments would necessitate a broader re-assessment of the impact of chymical medicine, one which would go beyond the doctrines and "schools" of the most prominent theorists and would not focus narrowly only on the use of mineral substances in medicine. By the end of the seventeenth century, the ideas of Van Helmont in particular had taken a variety of permutations, including the "materialist" versions of which the acid-alkali theory was the most prominent. Adequately reconstructing these developments would not be an easy task: as Evan Ragland has shown, the sources of these theories have long been misunderstood in the

[17] Ibid., 141–142.

[18] Broadly, the "physiological" view points to disease as a result of disturbances in the natural order of an individual's internal processes (e.g. humoral imbalance in Galenism) while the "ontological" view treats disease as the result of a distinct entity which enters the individual (e.g. the Helmontian *peregrinus exoticus*). The physiological model tends to emphasize the particularities of the individual case, while the ontological model looks for commonalities—the pathological entity—across cases. See Owsei Temkin, "The Scientific Approach to Disease: Specific Entity and Individual Sickness," in *The Double Face of Janus and Other Essays in the History of Medicine* (Baltimore: Johns Hopkins University Press, 1977), 441–55; Walter Pagel, "Van Helmont's Concept of Disease - To Be or Not To Be? The Influence of Paracelsus," *Bulletin of the History of Medicine* 46, no. 5 (1972): 419–54; Walter Pagel, *Joan Baptista van Helmont: Reformer of Science and Medicine* (Cambridge and New York: Cambridge University Press, 1982).

historiography, and a better idea of their diffusion would necessitate a return to the sources.[19] A better appreciation of chymical theory would also need to be complemented by a better understanding of the diffusion of chymical practices, particularly in pharmacy, a potential direction that has been opened by the recent revival of interest in the history of materials and concrete practices in early modern science.[20]

In this perspective, a stronger effort to combine intellectual and economic history would be very useful, and I believe that this is one of the methodological lessons to be drawn from my research results. I have endeavored to show that intellectual and economic factors were deeply intertwined in the history of secret remedies. Cinchona and ipecacuanha offer two prominent examples. The material presence in Europe of cinchona bark was the basic precondition for its commodification, but its use and circulation stagnated for decades, due to the skepticism of the medical establishment. As we have seen, this skepticism had both clinical and theoretical motivations: it was related to the uncertainty of the drug's effects on patients (the relapse problem) and its incompatibility with Galenic pharmacology. Practical and theoretical developments in medicine were necessary to lift cinchona out of this impasse: on the practical level, it took a new pharmaceutical preparation of the bark in the form of Robert Talbor's *remède anglois*, held to be much more successful than those already in circulation; on the theoretical level, it took a revised chymical account of the drug's action, partnered with an

[19] Evan R. Ragland, "Experimenting with Chemical Bodies: Science, Medicine, and Philosophy in the Long History of Reinier de Graaf's Experiments on Digestion, from Harvey and Descartes to Claude Bernard" (PhD dissertation, Indiana University, 2012).

[20] Pamela H. Smith, "In the Workshop of History: Making, Writing, and Meaning," *West 86th: A Journal of Decorative Arts, Design History, and Material Culture* 19 (2012): 4–31; Pamela H. Smith, Amy R. W. Meyers, and Harold J. Cook, *Ways of Making and Knowing: The Material Culture of Empirical Knowledge* (Ann Arbor: University of Michigan Press, 2014); Lawrence M. Principe, "'Chemical Translation' and the Role of Impurities in Alchemy: Examples from Basil Valentine's Triumph-Wagen," *Ambix* 34, no. 1 (1987): 21–30.

increasing dissatisfaction with the limits of Galenic pharmacology and the Aristotelian qualities themselves. These intellectual forces interacted with the material world of economics, triggering a market rush to purchase all the cinchona available and an effort to duplicate the new preparation. This wave of experiment and reverse engineering, in turn, generated a corresponding wave of learned publication on the medical virtues of the bark in the intellectual domain.

As we have seen, this phenomenon repeated itself in the case of Helvétius' popularization of ipecacuanha. On the theoretical level, Adrien Helvétius drew on the case of cinchona and fevers as a model problem solution: he took a root that had previously been disregarded as a dangerous emetic and recognized its virtues as a specific against dysentery. On a practical level, he developed a preparation that reduced ipecacuanha's emetic effects so that it would stay inside the patient's digestive tract, a condition that he saw as critical for the drug's efficacy against dysentery. Here again practical and theoretical transformations of the drug had an impact on the world of the market: equipped with his awareness of the drug's virtues and of a useful method for preparing it in such a way as to enhance them, Helvétius availed himself of this "information asymmetry" in the market to purchase as much of the drug as possible at low cost from merchants and apothecaries who had not recognized its real value. As such, practical and theoretical transformations—the proper objects of the intellectual history of medicine—stand at the origin of Helvétius' entire monopoly, prior to his negotiations at court, his military contracts, and his innovative distribution system.

These cases stand as a reminder of the critical insights that intellectual history can offer to our understanding of the market forces in medicine, particularly the forces that

enabled the prototypes of large-scale pharmaceutical production that are the object of this study. They show us that practical and theoretical developments in medical therapeutics played a critical role in the long chain of events that brought a South American root like ipecacuanha to the army hospitals of the Rhineland and the peasants of the French provinces, transforming a raw plant substance into a drug and enabling it to travel from one side of the globe to the other—from South America to Southeast Asia, via Paris.

Appendix 1: Tables

**Table 1:**
**Exclusive-sale privileges, by date (total: 46)**

| Name | Occupation | Remedy | Date | Cote | fol. |
|---|---|---|---|---|---|
| Descombes, Desiderio | Operateur-distillateur ordinaire | Orviétan | 27 November 1625 | V5 1230 | 94r-95r |
| Barbereau | Médecin ordinaire | Pierre infusé d'extraits minéraux et végétaux; poudres | 12 April 1670 | O1 14 | 164r-165r |
| Bouillon, Duc de | Grand chambellan | Sachets contre la vermine | 17 September 1677 | O1 21 | 202r-203r |
| Lafaveur, Sébastien Matte and Daumont, Jean-Baptiste | Distillateur | Sirop capillaire, eaux de la reine de Hongrie, l'huile de petroleum de Gabian | 8 August 1678 | V3 189 | 10r-v |
| Guillemot, Pierre dit Dupré | Operateur-distillateur privilégié | Remèdes | 17 January 1681 | V3 189 | 68r |
| Daumont, Jean-Baptiste | Marchand bourgeois de Paris | Sirops capillaires de Montpellier et du Canada, eaux de la reine de Hongrie, l'huile de petroleum de Gabian | 14 January 1682 | V5 1245 | 118r-121v |
| Le Blond, Jean | | Sirops et capillaires de Canada et l'Eaux de la Reyne d'Hongrie | 28 February 1682 | V5 1244 | 299r-v |
| Aubry | Médecin | Remède pour les fièvres | 1 May 1683 | O1 27 | 108v-109r |
| Braudet, Jacques | | Eaux minérales et médicinales de Forges | 22 January 1685 | V5 1245 | 247r-248v |
| Contugy, Louis-Anne | | Orviétan | 6 February 1686 | V5 1246 | 209r-v |
| Contugy, Louis-Anne et Roberte Richard | | Orviétan | 27 December 1686 | O1 30 | 396v-397v |
| Helvétius, Adrien | Docteur en médecine | Remède spécifique contre les cours de vente, flux de sang, et dysenterie | 24 August 1688 | O1 32 | 224r-225r |
| Damoiselle Guyet, femme du Sieur Vallefont | | Baume pour les gouttes et rhumatismes | 31 March 1688 | BN ms fr 21738 | 390r |
| Jouën, Louis | Oculiste | Remède pour le cancer | 18 September 1691 | O1 35 | 258v-259r |
| Obelin de Quercetan, Pierre | | Antidote de France | 28 May 1689 | V5 1247 | 62r-63r |

| Name | Occupation | Remedy | Date | Cote | fol. |
|---|---|---|---|---|---|
| L'Escot, Marie | Veuve de Pierre Obelin de Quercetan | Antidote de France | 31 July 1690 | V5 1247 | 252r-253r |
| Leroux, Claude | | Sel arabe et poudre solaire | 28 March 1693 | V3 190 | 150v-151r |
| Montroche, Thier de | Docteur | Remède contre toutes sortes de véroles | 15 April 1693<br>25 April 1693 | V3 190<br>O1 37 | 138r<br>321v |
| Alleaume | | Eaux minérales | 20 January 1694 | V3 190 | 129v |
| Contugy, Jean-Louis | | Orviétan | 24 April 1694 | O1 38 | 109r-v |
| Daumont, Jean-Baptiste | | Eaux minérales | 1694 | V3 190 | 128v |
| Danet, Guillaume | | Eaux minérales | 1698 | V3 190 | 149 |
| Gerauldy | Opérateur pour les dents | Essences et opiats pour les dents | 31 March 1700 | O1 44 | 124r-125v |
| Contugy, Genevieve | | Orviétan | 12 July 1700 | O1 44 | 297v-298r |
| De Vaux, Veuve de Jean | Veuve maitre chirurgien | Emplastre pour les descentes | 29 December 1700 | O1 44 | 644v-645r |
| Helvétius, Adrien | Docteur en médecine | Remède spécifique contre les cours de vente, flux de sang, et dysenterie | 7 October 1703 | G7 716 | Placet |
| Guiller, Ferdinand | Chevalier de St. Lazare | Poudre febrifuge | 30 September 1713 | V7 246 (6) | dossier 3, item 2 |
| Meunier, Jean | | Tisane de Callac | 27 December 1715 | O1 59 | 220v-221v |
| Le Roux, Claude and Lasalle, Roger | Ancien chirurgien d'armée (Lasalle) | Sel arabe et poudre solaire | 22 December 1716 | V3 191 | 140v-141r |
| Lasalle, Roger | Ancien chirurgien d'armée | Remède contre les callosités et gonflements du col de la vessie | 22 December 1716 | V3 191 | 141r |
| Contugy | | Orviétan | 10 May 1716 | V 1252 | 47r |
| Legrand, Pierre | Chirurgien d'armée | Remède contre les maladies secrètes | 29 June 1716 | O1 60 | 95v-96r |
| Toscano, Gregoire et Paul | | Antidote ou contrepoison | 3 August 1716 | V 1252 | 43r |
| Fournier de la Flotte, Jacob | | Antidote de France | 5 November 1716 | V 1252 | 47v-48r |

| Name | Occupation | Remedy | Date | Cote | fol. |
|---|---|---|---|---|---|
| Bonvalet | | Sirop fondant pour l'hydropsie et apoplexie | 26 December 1716 | O1 66 | 459r |
| Frechon | Chirurgien | Remède spécifique contre les maladies vénériennes | 14 October 1721 | V3 192 | 48r |
| Gerauldy | | Antidote theriacal | 1 August 1721 | O1 65 | 174r |
| Bols | "Anglais" | Remède pour la guérison des descentes sans bandages | 21 September 1722 | O1 69 | 273r-v |
| Granger, Pierre | Chirurgien | Remède spécifique contre les maladies vénériennes | 24 August 1722 | V3 192 | 47v |
| Mandet, Guillaume du, dit des Chapelles | Chirurgien du duc de Vendôme | Élixir | 15 December 1722 | O1 66 | 447-448 |
| Barbey | Veuve du sieur Garrus | Élixir du sieur Garrus | 1723 | O1 67 | 330 |
| Guiller, Ferdinand | Chevalier de St. Lazare | Poudre fébrifuge | 1 April 1724 | O1 68 | 145-146 |
| Hubert | Chirurgien | Remède spécifique contre les maladies vénériennes | 7 February 1725 | V3 192 | 48v |
| Toscano, Gregoire | | Antidote ou contrepoison | 11 June 1727 | V5 1254 | 183r-v |
| Mauman | Ancien chirurgien-major | Remèdes dont il a le secret (maladies vénériennes) | 9 March 1727 | O1 71 | 76-77 |
| Barbey | Veuve Garrus | Élixir du sieur Garrus | 21 October 1727 | O1 71 | 329-330 |

**Table 2:**
**Laboratory privileges, by date (total: 10)**

| Name | Occupation | Date | Cote | fol. |
|---|---|---|---|---|
| de Rochas, Henri | Médecin ordinaire du roi | 1646 | Z 84 | 101 A |
| Charpentier, Marguerite | | 15 March 1663 | Arsenal ms 10357 | p. 522, 524 |
| Barré, Cosme Damien | Chirurgien du garde robe et distillateur suivant la cour | 15 January 1678 | V3 189 | 15r-16r |
| Barré, Cosme Damien | Chirurgien du garde robe et distillateur suivant la cour | 8 October 1679 | V3 189 | 99r-v |
| Del Caretto Patrice, Nicolas Cinoli | Docteur en médecine | 31 January 1685 | O1 29 | 92r-v |
| Lémery, Nicolas | Docteur en médecine | 8 April 1686 | O1 30 | 132r-v |
| Helvétius, Adrien | Docteur en médecine | 24 August 1688 | O1 32 | 224r-225r |
| Aignan, Nicolas and Rousseau de Montbazon | | 11 July 1690 | O1 34 | 194r-v |
| Fronville | | 30 October 1700 | O1 44 | 546r-v |
| Helvétius, Adrien | Docteur en medicine | 7 October 1703 | G7 716 | Placet |

**Table 3:**
**Pensions, by date (total: 6)**

| Name | Remedy | Date | Value (*livres tournois* per annum) | Cote | fol. |
|---|---|---|---|---|---|
| Verdure, Philippe de la | Remède spécifique pour les fièvres | 9 September 1680 | 1,200 | O1 24 | 233r-v |
| Talbor, Robert | Remède anglois | 13 November 1680 | 2,000 | O1 24 | 196v |
| Alliot | Remède contre le cancer | 4 April 1683 | 2,400 | O1 27 | 88r |
| Guiller, Ferdinand | Racines de febrifuge | 13 February 1713 | 1,200 | O1 57 | 20r-v |
| Martin Blumantié, sieur de la Ligerie | poudre chartreuse | 8 April 1720 | 1,200 | O1 64 | 96r-v |
| Barbey, Marie-Madeleine, veuve Garus | Elixir de Garus | 9 April 1723 | 1,000 | O1 67 | 332 |

**Table 4:**
**Exclusive sales privileges:**
**Fines for counterfeiters**

| Fine (*livres tournois*) | No. of privileges |
|---|---|
| 1,000 | 6 |
| 1,500 | 2 |
| 3,000 | 10 |
| Total specifying fine: | 18 |

**Table 5:**
**Exclusive sales privileges:**
**Distribution of fines for counterfeiters**

| Fine distribution pattern | No. of privileges |
|---|---|
| 1/3 each for king + vendor + hospital | 5 |
| 1/3 each for informer + vendor + hospital | 3 |
| 1/2 each for vendor + hospital | 6 |
| Total with a divided fine: | 14 |

## Appendix 2: Research methodology and sources for Tables 1-3

Before the bureaucratization of privilege-granting for secret remedies under the Société royale de médecine, all letters patent and brevets were granted through the authority of the Secretary of State of the Royal Household on behalf of the king on the recommendation of the first physician. I have found no documented efforts to develop systematic process of examination before 1728. The nature of the records generated by this form of licensing has presented special challenges: in the absence of bureaucratic procedures or records, the corpus of privileges I have assembled represents a series of *ad hoc* permissions granted by arbitrary authority which I have had to painstakingly extract from the voluminous dispatch registers of the Secretary of State (AN series $O^1$ 1-128). Within these registers, which themselves have only survived partially for the period from 1669 onward, medical privileges appear sporadically, organized only by order of date. Indexes are provided at the beginning of each volume but they often only class them as "brevet," "permission," or "pension" with the name of the recipient, making no mention of their specifically medical nature and classing them alongside documents of the same type alongside a plethora of other kinds of non-medical "brevets," "permissions," or "pensions" granted to individuals. These non-medical brevets include, naturalisation letters; pensions; orders to imprison, exile, or pardon convicted criminals; dispensations for the sale of seigniorial lands; and provisions of every kind of office or position within the royal household. Checking through thousands of pages of these systematically to see any are medical privileges would be impractical, so I have instead relied on the only finding aid for the fonds. This finding aid, a twenty-six volume (7,997-page) typewritten alphabetical index of the recipients of all royal letters or brevets with a brief description

of the nature of the entry (noting, for instance, if the letters, brevet, or pension is for a remedy), was compiled by several generations of archivists and appears to be of uneven quality. I scanned systematically (entry-by-entry) through volumes 1-6 and 10-12 of this index. For the remaining volumes I was able to make use of keyword searches as this finding aid was digitized and OCRed while the project was already underway.[1] I have also made more localized searches based on lists of vendors of proprietary remedies which I have assembled based on other sources, notably the various articles by Maurice Bouvet (see bibliography), and the *Essais de médecine* of Jean Bernier, which include dozens of pages listing various Paris "empirics" and "charlatans."[2] Their names are often enciphered through anagrams in Bernier's *Essais*, but the copy at the Bibliothèque de l'Arsenal includes manuscript annotations which decode the anagrams (accurately, I believe).

To complicate matters further, not all brevets and letters patent appear to have been copied into the surviving dispatch registers: many only appear in the *registres d'enregistrement* of various courts, where privilege-holders would often submit their documents to be verified and registered in order to make them binding (*exécutoire*) in a given jurisdiction.[3] Whenever I locate a letter or brevet that has been registered in the V[3]

[1] The following search terms were used: remède, spécifique, médicament, drogue, maladie, malade, laboratoire, fourneau/fourneaux.

[2] Jean Bernier, *Essais de medecine, où il est traité de l'histoire de medecine et des medecins* (Paris: Simon Langronne, 1689), 415–526, ch. XVI, "Des charlatans pretendus Medecins, et des Medecins Charlatans."

[3] This of course raises an important question: could some of the letters and brevets which appear in *registres d'enregistrement* but not in the Secretary of State's dispatch register be counterfeits? It is certainly possible, but two other possibilities should also be considered: some may simply have never been copied into the dispatch registers through plain neglect. They were, it must be admitted, not the most important letters being dispatched by the Secretary of State. It is also possible that copies of these letters and brevets do in fact exist in the surviving dispatch registries but have not been properly entered into the indexes of the registers and, consequently, do not appear in the finding aids for the fonds. In cases where the date of letters or a brevet is known from another source (e.g. a printed handbill, a notarial act) it would

(Prévôté de l'hôtel) or $V^5$ (Grand conseil) *registres d'enregistrement*, I cross-check the series $O^1$ finding aid (the alphabetical index to the dispatch registers) to see if I can locate the name of the holder there. In some cases I have even checked the register itself to see if I can find the privilege transcribed at the date of its granting. In the vast majority of cases, however, these exercises have been fruitless, which suggests the surviving dispatch registers are incomplete. This hypothesis is confirmed by the fact that several of the original register "tables de matières" actually signal that there is an additional dispatch register "sous-coté," but these seem not to have survived. As such, although all of the privileges ultimately originate either with the Secretary of State or the first physician, there is no single, stable source base to collect privileges.

*How representative is this corpus?* Several of the letters and brevets refer to earlier privileges which have not survived. A notable example of this problem is the oft-cited first letters patent granted to Christophle Contugy for the sale of orviétan on April 9, 1647. This privilege is attested to by numerous other sources subsequent letters patent granted to his descendants: in the 1648 *Commentaires* of the Paris Faculty, where the Dean Piètre explicitly states that he examined it. I have noted twelve similar instances for the pre-1728 period alone, wherein a reputable source, either a publication (e.g. the *Mercure Gallant*) or a subsequent legal document (an *arrêt*, or a renewed patent letter), refers directly to a brevet or letter which I have not been able to locate at the archives. If we add these twelve reliably attested letters and brevets to the existing pre-1728 corpus, we reach a total of sixty-nine, of which only fifty-six have survived for inclusion into my corpus, which suggests I am missing, at minimum, 19% of those that we can say with

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be possible to check the registers for the corresponding date, but even this poses problems as brevets and letters sometimes appear out of sequence in the registers.

certainty were granted. As such, the figures I provide above, although revealing, should not be taken as complete: the phenomenon which they document was likely much broader in scope.

Appendix 3:
Figures

**Figure 1**
Ferdinand de Guiller's 1713 brevet. Parchment. 50x35cm. AN $V^7$ 246 (6) dossier 3, item 2. Note the signatures of Louis XIV (bottom center) and Phélypeaux (very light, bottom right).

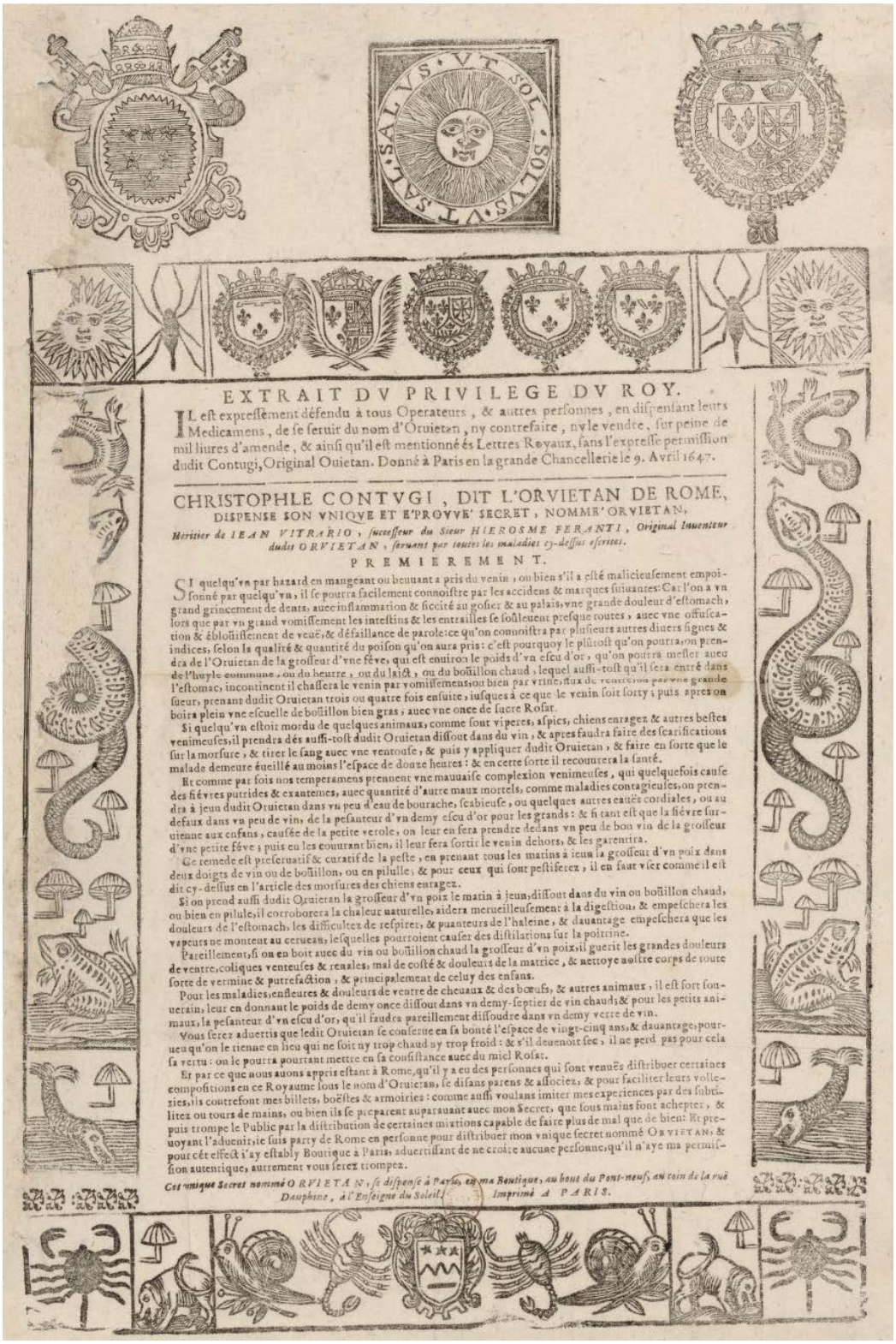

**Figure 2**
"Description du Laboratoire des Capucins du Louvre," between p. 48 and 49 of the December 1678 issue of *Le Nouveau Mercure Galant.* Courtesy of Lawrence M. Principe.

**Figure 3**
Photograph of an intact orviétan pot. Source: The Bridgeman Art Library, http://www.bridgemanart.com/de/asset/236384/french-school-18th-century/box-for-orvietan-lead (accessed 24 November 2013). Original from the collection of the Ordre National des Pharmaciens, Paris.

**Figure 4**

**Figure 5**

Source for Figure 4 and Figure 5: Photos of "Vrai Orvietan de Rome" lids/caps posted by users "Mlesplomb" and "Prusse du sud," on the online forum "Échange-passion: Forum privé consacré à l'échange (Monnaies, Objects, Pierres)," http://www.echange-passion.com/t1724-france-plomb-de-scelle-vrai-orvietan-de-rome (accessed November 28 2013).



EXTRAIT DV PRIVILEGE DV ROY.

IL eſt expreſſément défendu à tous Operateurs, & autres perſonnes, en diſpenſant leurs Medicamens, de ſe ſeruir du nom d'Oruietan, ny contrefaire, ny le vendre, ſur peine de mil liures d'amende, & ainſi qu'il eſt mentionné és Lettres Royaux, ſans l'expreſſe permiſſion dudit Contugi, Original Ouietan. Donné à Paris en la grande Chancellerie le 9. Avril 1647.

CHRISTOPHLE CONTVGI, DIT L'ORVIETAN DE ROME,
DISPENSE SON VNIQVE ET E'PROVVE' SECRET, NOMME' ORVIETAN,

*Heritier de IEAN VITRARIO, ſucceſſeur du Sieur HIEROSME FERANTI, Original Inuenteur dudit ORVIETAN, ſeruant par toutes les maladies cy-deſſus eſcrites.*

PREMIEREMENT.

SI quelqu'vn par hazard en mangeant ou beuuant a pris du venin, ou bien s'il a eſté malicieuſement empoiſonné par quelqu'vn, il ſe pourra facilement connoiſtre par les accidens & marques ſuiuantes: Car l'on a vn grand grincement de dents, auec inflammation & ficcité au goſier & au palais, vne grande douleur d'eſtomach, lors que par vn grand vomiſſement les inteſtins & les entrailles ſe ſoûleuent preſque toutes, auec vne offuſcation & éblouiſſement de veuë, & défaillance de parole: ce qu'on connoiſtra par pluſieurs autres diuers ſignes & indices, ſelon la qualité & quantité du poiſon qu'on aura pris: c'eſt pourquoy le plûtoſt qu'on pourra, on prendra de l'Oruietan de la groſſeur d'vne féve, qui eſt enuiron le poids d'vn eſcu d'or, qu'on pourra meſler auec de l'huyle commune, ou du beurre, ou du laict, ou du boüillon chaud, lequel auſſi-toſt qu'il ſera entré dans l'eſtomac, incontinent il chaſſera le venin par vomiſſemens, ou bien par vrine, flux de ventre, ou par vne grande ſueur, prenant dudit Oruietan trois ou quatre fois enſuite, iuſques à ce que le venin ſoit ſorty; puis apres on boira plein vne eſcuelle de boüillon bien gras, auec vne once de ſucre Roſat.

Si quelqu'vn eſtoit mordu de quelques animaux, comme ſont viperes, aſpics, chiens enragez & autres beſtes venimeuſes, il prendra dés auſſi-toſt dudit Oruietan diſſout dans du vin, & apres faudra faire des ſcarifications ſur la morſure, & tirer le ſang auec vne ventouſe, & puis y appliquer dudit Oruietan, & faire en ſorte que le malade demeure éueillé au moins l'eſpace de douze heures: & en cette ſorte il recouurera la ſanté.

Et comme par fois nos temperamens prennent vne mauuaiſe complexion venimeuſes, qui quelquefois cauſe des fiévres putrides & exantemes, auec quantité d'autre maux mortels, comme maladies contagieuſes, on prendra à jeun dudit Oruietan dans vn peu d'eau de bourache, ſcabieuſe, ou quelques autres eaüés cordiales, ou au defaux dans vn peu de vin, de la peſanteur d'vn demy eſcu d'or pour les grands: & ſi tant eſt que la fiévre ſuruienne aux enfans, cauſée de la petite verole, on leur en fera prendre dedans vn peu de bon vin de la groſſeur d'vne petite féve; puis en les couurant bien, il leur fera ſortir le venin dehors, & les garentira.

Ce remede eſt preſeruatif & curatif de la peſte, en prenant tous les matins à ieun la groſſeur d'vn poix dans deux doigts de vin ou de boüillon, ou en pilulle; & pour ceux qui ſont peſtiferez, il en faut vſer comme il eſt dit cy-deſſus en l'article des morſures des chiens enragez.

Si on prend auſſi dudit Oruietan la groſſeur d'vn poix le matin à jeun, diſſout dans du vin ou boüillon chaud, ou bien en pilule, il corroborera la chaleur naturelle, aidera merueilleuſement à la digeſtion, & empeſchera les douleurs de l'eſtomach, les difficultez de reſpirer, & puanteurs de l'haleine, & dauantage empeſchera que les vapeurs ne monteut au cerueau, leſquelles pourroient cauſer des diſtilations ſur la poitrine.

Pareillement, ſi on en boit auec du vin ou boüillon chaud la groſſeur d'vn poix, il guerit les grandes douleurs de ventre, coliques venteuſes & reuales, mal de coſté & douleurs de la matrice, & nettoye noſtre corps de toute ſorte de vermine & putrefaction, & principalement de celuy des enfans.

Pour les maladies, enflеures & douleurs de ventre de cheuaux & des bœufs, & autres animaux, il eſt fort ſouuerain, leur en donnant le poids de demy once diſſout dans vn demy-ſeptier de vin chaud; & pour les petits animaux, la peſanteur d'vn eſcu d'or, qu'il faudra pareillement diſſoudre dans vn demy verre de vin.

Vous ſerez aduertis que ledit Oruietan ſe conſerue en ſa bonté l'eſpace de vingt-cinq ans, & dauantage, pourueu qu'on le tienne en lieu qui ne ſoit ny trop chaud ny trop froid: & s'il deuenoit ſec, il ne perd pas pour cela ſa vertu: on le pourra pourtant mettre en ſa conſiſtance auec du miel Roſat.

Et par ce que nous auons appris eſtant à Rome, qu'il y a eu des perſonnes qui ſont venuës diſtribuer certaines compoſitions en ce Royaume ſous le nom d'Oruietan, ſe diſans parens & aſſociez, & pour faciliter leurs volleries, ils contrefont mes billets, boëſtes & armoiries: comme auſſi voulans imiter mes experiences par des ſubtilitez ou tours de mains, ou bien ils ſe preparent auparauant auec mon Secret, que ſous mains ſont achepter, & puis trompe le Public par la diſtribution de certaines mixtions capable de faire plus de mal que de bien: Et preuoyant l'aduenir, ie ſuis party de Rome en perſonne pour diſtribuer mon vnique ſecret nommé ORVIETAN, & pour cét effect i'ay eſtably Boutique à Paris, aduertiſſant de ne croire aucune perſonne, qu'il n'aye ma permiſſion autentique, autrement vous ſerez trompez.

*Cet vnique Secret nommé ORVIETAN, ſe diſpenſe à Paris, en ma Boutique, au bout du Pont-neuf, au coin de la ruë Dauphine, à l'Enſeigne du Soleil.*

*Imprimé A PARIS.*

**Figure 6**
Christophle Contugy Orviétan broadsheet. Woodcut. Source: Collection Michel Hennin. Estampes relatives à l'Histoire de France, vol. 39, p. 28.
Srouce: Gallica. Original: BnF Richelieu, Reserve QB- 201 (39).


**Figure 7**
(detail of Figure 6 top-center)

**Figure 8**

**Figure 9**

SOL SOLUS UT

**Figure 10**

Source for Figures 8-10: Photos posted by users terremythe, identified as *orviétan* pots/lids by user Alice25, on "la-detection.com - Forum de discussion, identification trouvailles, detecteur de metaux," http://www.la-detection.com/dp/message-75142.htm (accessed November 28 2013).

**Figure 11**

Theodore Rombouts, “The tooth-puller” (ca. 1635). Source: Baroque in the Southern Netherlands Online Museum (http://barokinvlaanderen.vlaamsekunstcollectie.be/en, accessed December 15, 2015). Original: Museum of Fine Arts Ghent. Note the folded parchment with dangling wax seals.


**Figure 12**

Etching. Francesco Curti after Giuseppe Maria Mitelli from *L'arti per via* (Bologna: Gioseppe Longhi 1660). Source: Wellcome Images.

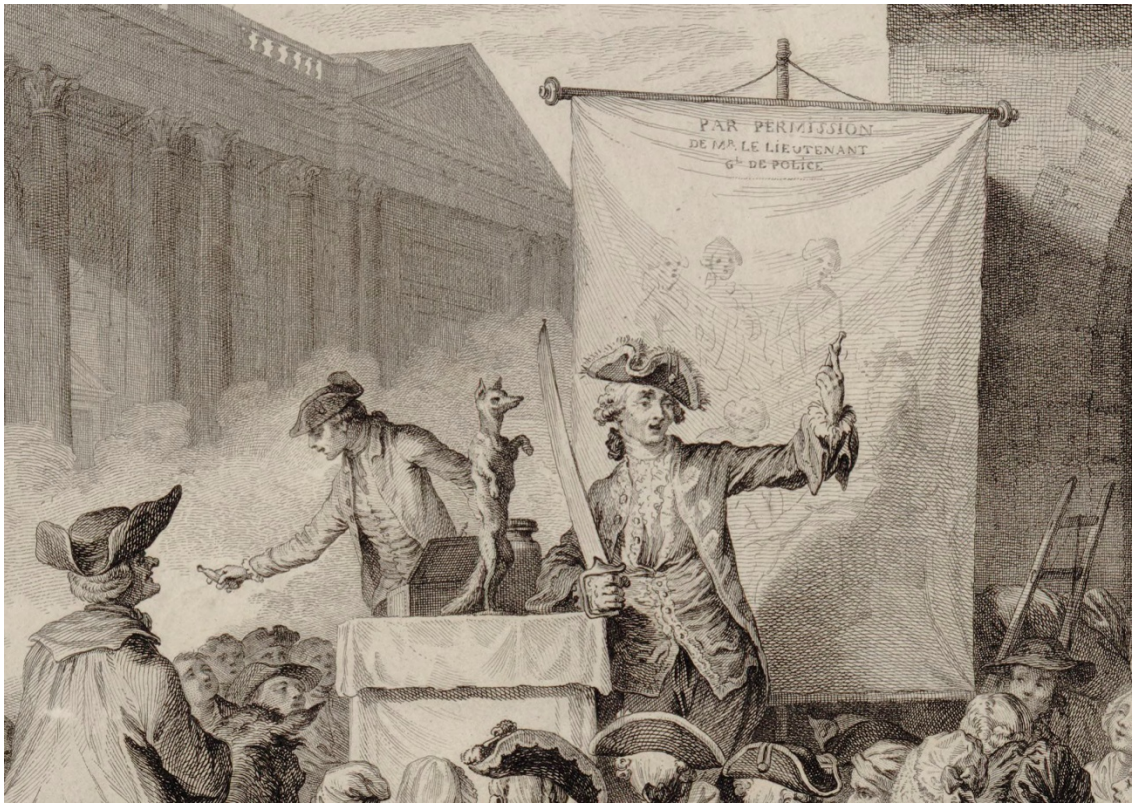



**Figure 13**

Detail from *Le Charlatan françois*, 1777. Engraving. Isidore-Stanislas Helman after Jean-Duplessis Bertaux. Source: Gallica. Original: Collection Michel Hennin. BnF Richelieu, Reserve FOL-QB-201 (110).


**Figure 14**

Detail from *Le Charlatan*, 1785. Hand coloured etching and aquatint. Antoine Borel after J. Augustin L'Eveillé. Source: Wellcome Images.

**Figure 15**: Lajtuais revenues

Figure 15.1:
1735-1736 Sales by revenue (in *livres tournois*) of the *poudre fébrifuge* (Total: 14,373 livres)

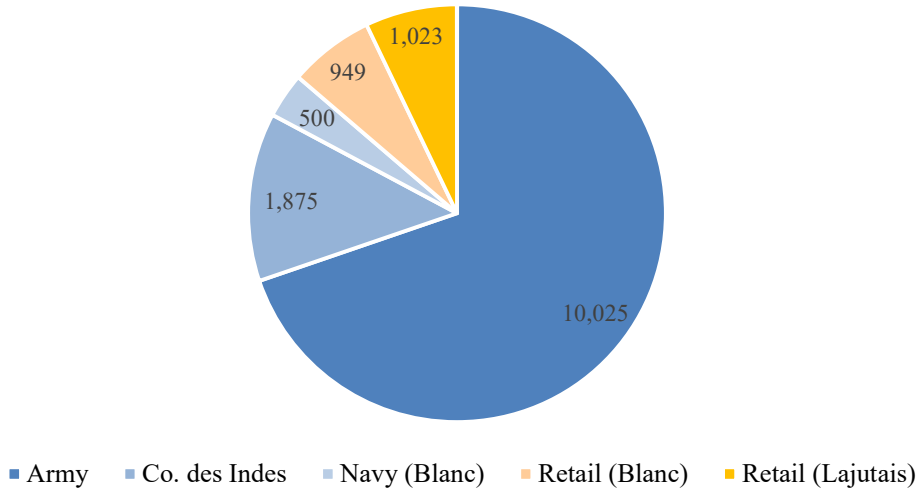
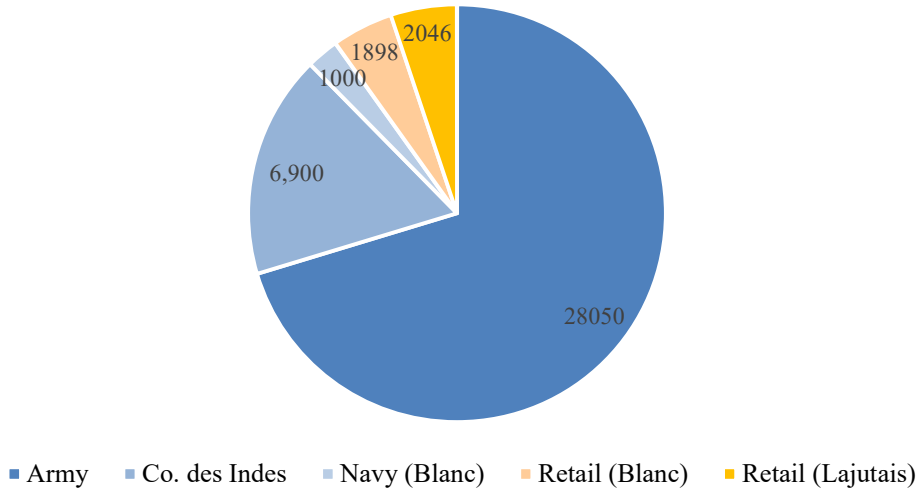



Figure 15.2:
1735-1736 Sales by volume (in *prises,* individually packaged doses) of the *poudre fébrifuge* (Total: 39,894 *prises*)




The reason for distinguishing between sales by volume and by revenue is to take into account the 20% discount received by the French army. Figure 2 also includes the full quantity of *poudre* that was shipped by the *Compagnie des Indes* to its colonies: many of these shipments spoiled, so the *Compagnie* paid Lajutais for only half of the total shipment. This chart thus shows that both the French army and the *Compagnie des Indes* were even more significant in the total supply volume than the previous chart, which includes only receipts, would suggest.

NB: Blanc is the Parisian retailer for the *poudre fébrifuge*, but appears to have been Lajutais' channel for the navy contract (see above). Lajutais himself sold the drug from his residence in Vincennes.

Appendix 4
Chronological table of the King's First Physicians
and Secretaries of State for the Royal Household
1675–1775

Secretaries of State for the Royal Household (*Secrétaires d'État de la Maison du roi*)[1]

| | |
|---|---|
| 1672–1690 | Jean-Baptiste Colbert, marquis de Seignelay<br>(also Navy Secretary) |
| 1690–1699 | Louis Phélypeaux, comte de Pontchartrain<br>(also Controller General and Navy Secretary, later Chancellor) |
| 1699–1715 | Jérôme Phélypeaux, comte de Pontchartrain<br>(also Navy Secretary) |
| 1715–1718 | Louis Phélypeaux, marquis de La Vrillière |
| 1718–1749 | Jean-Frédéric Phélypeaux, comte de Maurepas |
| 1749–1775 | Louis Phélypeaux, comte de Saint-Florentin, duc de la Vrillière |

Royal First Physicians (*Premiers médecins du roi*)[2]

| | |
|---|---|
| 1671–1693 | Antoine Daquin |
| 1693–1715 | Guy-Crescent Fagon |
| 1715–1718 | Louis Poirier |
| 1718–1730 | Claude-Jean-Baptiste Dodart |
| 1731–1732 | Pierre Chirac |
| 1732–1752 | François Chicoyneau |
| 1752–1770 | Jean-Baptiste Sénac |
| 1774–1780 | Joseph Lieutaud |
| 1780–1788 | Joseph-Marie-François Lassone |

[1] Source: Bernard Barbiche, *Les institutions de la monarchie française à l'époque moderne (XVIe - XVIIIe siècle)* (Paris: Presses Universitaires de France, 2012), 240.

[2] Source: Paul Delaunay, *Le monde médical parisien au dix-huitième siècle.* (Paris: J. Rousset, 1906), 93, x.

Archival abbreviations

AAP-HP Archives de l'Assistance publique – Hôpitaux de Paris

AD Archives départementales
- Puy-de-dôme (Clermont-Ferand)
- Ille-et-Vilaine (Rennes)
- Yvelines (Saint-Quentin-en-Yvelines)

AME Archives des Missions Etrangères de Paris (MEP)

AN Archives nationales
(Centre d'accueil et de recherche des Archives nationales, Paris)

| | |
|---|---|
| AE | Affaires étrangères (consulats) |
| $G^7$ | Contrôle général des finances |
| MARINE | Fonds de la Marine |
| MC | Minutier central des notaires de Paris |
| $O^1$ | Maison du Roi |
| $V^3$ | Prévôté de l'Hôtel |
| $V^5$ | Grand conseil |
| X | Parlement de Paris |
| Y | Châtelet |

ANM Académie nationale de médecine

| | |
|---|---|
| SRM | Fonds du Société royale de médecine |

BM Bibliothèque municipale
- Reims, Bibliothèque Carnegie

BIUS Bibliothèque interuniversitaire de santé – Université Paris Descartes
- Pharmacie = Pôle Pharmacie
  - Archives de la Communauté des apothicaires-épiciers de Paris
    - Registres
    - Boîtes A-BL
- Médecine = Pôle Médecine

BnF Bibliothèque nationale de France

SHD Service historique de la Défense (Vincennes)

| | |
|---|---|
| GR A | Fonds anciens |

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